Site Lava Beds Natio	Date onal Monument (L	•	Specific Conductance	DO
Heppe Ice Cave	10/24/2005	0.28	178	10
		0.23	178	9.89
		0.24	178	9.95
Upper Ice	10/25/2005	0.29	61	5.61
		0.24	6	5.67
		0.26	59	6.21
Merrill	10/25/2005	0.48	132	11.57
		0.35	130	12.11
		0.2	132	12.36
Duffys Well	10/27/2005	0.01	643	3.33
		0.12	91	7.2
		0.09	58	10.45

рН	Coordinate	fecal sample collected	water sample collected	Nitrate/CI sampl
7.76	620958	na	yes	na
7.77	4617243	na	yes	na
7.76		na	yes	na
na	618800	na	yes	na
na	4617193	na	yes	na
na		na	yes	na
na	620689		yes	na
na	4620677	na	yes	na
na		na	yes	na
na	622997		yes	na
na	4617659	na	yes	na
na		na	yes	na

e collected

ID	CI	NO3	SO4	Na	NH4	K
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Duffy's Well 5/18/05-1	0.23	2.04	10.97	0.64	0.05	0.25
Duffy's Well 5/18/05-2	0.09E	0.61	0.98	0.12	0.05	0.19
Duffy's Well 5/18/05-3	0.06E	0.39	0.33	0.14	0.01	0.18
Merrill Ice Cave 5/18/05-1	0.72	4.89	0.87	1.51	0.03	0.50
Merrill Ice Cave 5/18/05-2	0.54	4.20	0.71	1.47	0.03	0.46
Merrill Ice Cave 5/18/05-3	0.66	4.19	0.71	1.24	0.08	0.38
Skull 5/19/05-1	2.82	16.26	2.91	8.92	< 0.02	1.25
Skull 5/19/05-2	1.39	11.36	1.54	5.28	0.06	0.71
Skull 5/19/05-3	1.19	7.16	1.13	3.90	< 0.02	0.65
Caldwell 5/20/05-1	0.50	1.67	1.42	1.15	0.05	0.75
Caldwell 5/20/05-2	0.46	1.93	1.69	1.03	0.06	0.64
Caldwell 5/20/05-3	0.72	3.08	1.25	1.32	0.12	0.68
Crystal top level 5/20/05-1	0.06E	0.37	0.14	0.10	0.01	0.07
Crystal top level 5/20/05-2	0.09E	0.77	0.30	0.10	< 0.02	0.06
Crystal Blue Glacier 5/20/05-1	0.10E	0.26	0.49	0.07	< 0.02	0.09
Crystal Blue Glacier 5/20/05-2	0.07E	0.18	0.41	0.13	< 0.02	0.02

E =estimated

Mg	Ca	рН		Alk	bicarb	SC	ion bal
mg/L	mg/L	.		mg/L	mg/L	uS/cm	%
J	J			as CaCO3	-		
0	.75	4.50	6.44	3	4	12	-1
0	.16	0.84	6.44	3	4	12	-15
0	.12	0.70	6.44	3	4	12	-15
0	.84	1.72	6.96	5	6	20	4
0	.72	1.49	6.96	5	6	20	3
0	.65	1.25	6.96	5	6	20	-4
2	.99	6.72	7.86	28	34	87	2
1	.81	4.81	7.86	28	34	87	-12
1.	.22	4.65	7.86	28	34	87	-17
1.	.14	5.90	7.92	16	20	43	8
0	.69	2.05	7.92	16	20	43	-28
0	.66	3.23	7.92	16	20	43	-17
0	.07	0.99	6.63	4	5	56	-19
0	.05	0.60	6.63	4	5	56	-43
0	.04	0.51	6.49	3	4	2	-38
0.	.11	0.56	6.49	3	4	2	-26

Report To: US GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521

Attention: CHRIS CURRENS

Project: NPS-BASELINE WATER QUALITY INVENTORY LAVA BEDS

Analyte	Units	Results	Qualifier	MDL	RL
MERRILL #1 Water (5050957-01)	Sampled:05/	/17/05 09:00	Received:05/24/05 16:	:44	
рН	pH Units	7.76	I-03	0.01	0.01
Alkalinity as CaCO3	mg/l	44		2	5
Bicarbonate	"	54		2	5
Carbonate Specific Conductance		ND 155		2	5 10
Specific Conductance MEDDILL #2 Water (E050057.02)	umhos/cm		Pageinadi0E /24/0E 14	_	10
MERRILL #2 Water (5050957-02)	•		Received:05/24/05 16:		
pH	pH Units	7.78	1-03	0.01	0.01
Alkalinity as CaCO3 Bicarbonate	mg/l "	45 54		2	5 5
Carbonate		ND		2	5
Specific Conductance	umhos/cm	155		2	10
MERRILL #3 Water (5050957-03)	Sampled:05	/17/05 09:00	Received:05/24/05 16:	:44	
pH	pH Units	7.79	1-03	0.01	0.01
Alkalinity as CaCO3	mg/l	46		2	5
Bicarbonate	· ·	56		2	5
Carbonate		ND		2	5
Specific Conductance	umhos/cm	157		2	10
MERRILL #1-3 (ICE) Water (5050	957-04) Sam	pled:05/17/05	09:00 Received:05/2	4/05 16:44	
pH	pH Units	6.96	1-03	0.01	0.01
Alkalinity as CaCO3	mg/l "	5 6		2	5 5
Bicarbonate Carbonate		ND		2	5 5
Specific Conductance	umhos/cm	20		2	10
INCLINE CAVE #1 Water (505095	7-05) Sample	ed:05/17/05 11	:00 Received:05/24/0	05 16:44	
pH	pH Units	5.26	1-03	0.01	0.01
Alkalinity as CaCO3	mg/l	ND		2	5
Bicarbonate		ND		2	5
Carbonate	· ·	ND		2	5
Specific Conductance	umhos/cm	ND		2	10
INCLINE CAVE #2-3 (ICE) Water ((5050957-06)	Sampled:05/1	7/05 11:00 Received:	05/24/05 16:4	14
pH	pH Units	8.83	1-03	0.01	0.01
Alkalinity as CaCO3	mg/l "	26		2	5
Bicarbonate		27	1	2	5
Carbonate Specific Conductance	umhos/cm	2 46	J	2	5 10
-	Sampled:05/17		eceived:05/24/05 16:44		10
	-	6.88	1-03	0.01	0.01
pH Alkalinity as CaCO3	pH Units mg/l	6.88 21	1-03	2	5
Bicarbonate	"	26		2	5
Carbonate		ND		2	5
Specific Conductance	umhos/cm	130		2	10
DUFFY #2 Water (5050957-08)	Sampled:05/17	7/05 14:00 Re	eceived:05/24/05 16:44	ļ	
pH	pH Units	6.71	1-03	0.01	0.01
Alkalinity as CaCO3	mg/l	5		2	5
Bicarbonate		6		2	5
Carbonate Specific Conductores		ND		2	5 10
Specific Conductance DUFFY #3 Water (5050957-09)	umhos/cm Sampled:05/17	97 7/05 14:00 Re	eceived:05/24/05 16:44	2 I	10
•	•				0.01
рН	pH Units	6.67	1-03	0.01	0.01

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Analyte	Units	Results	Qualifier	MDL	RL
DUFFY #3 Water (5050957-09) Sampled:05/	17/05 14:00 Receive	ed:05/24/05 16:4	4	
Alkalinity as CaCO3	mg/l	7		2	5
Bicarbonate	11	9		2	5
Carbonate	"	ND		2	5
Specific Conductance	umhos/cm	92		2	10
DUFFY #1-3 (ICE) Water (505)	0957-10) Samր	oled:05/17/05 14:00	Received:05/24/	05 16:44	
pH	pH Units	6.44	1-03	0.01	0.01
Alkalinity as CaCO3	mg/l "	3	J	2	5
Bicarbonate	"	4	J	2	5
Carbonate Specific Conductance	umhos/cm	ND 12		2	5 10
•		Sampled:05/17/05 17	VOO Pacaivad-05	2 5/24/05 16:44	10
` ,	•	•			0.01
pH Alkalinity as CaCO3	pH Units mg/l	7.46 13	1-03	0.01 2	0.01 5
Bicarbonate	mg/i	16		2	5
Carbonate		ND		2	5
Specific Conductance	umhos/cm	47		2	10
BIG ICE CAVE #2-3 (ICE) Water	(5050957-12)	Sampled:05/17/05	17:00 Received:	05/24/05 16:44	4
pH	pH Units	7.57	1-03	0.01	0.01
Alkalinity as CaCO3	mg/l	21		2	5
Bicarbonate	"	26		2	5
Carbonate		ND		2	5
Specific Conductance	umhos/cm	84	00 00 Decelerate	2	10
FROZEN RIVER #1 (ICE) Water	(5050957-13)	Sampled:05/18/05 0		05/24/05 16:44	
pH	pH Units	6.82	I-03	0.01	0.01
Alkalinity as CaCO3	mg/l	4 5	J	2	5
Bicarbonate Carbonate		nD		2 2	5 5
Specific Conductance	umhos/cm	3	J	2	10
FROZEN RIVER #2 (ICE) Water	(5050957-14)	Sampled:05/18/05 0	09:00 Received:0)5/24/05 16:44	
Нq	pH Units	6.51	1-03	0.01	0.01
Alkalinity as CaCO3	mg/l	2	J	2	5
Bicarbonate	"	2	J	2	5
Carbonate	"	ND		2	5
Specific Conductance	umhos/cm	ND		2	10
FROZEN RIVER #3 (ICE) Water	(5050957-15)	Sampled:05/18/05 0	09:00 Received:0	05/24/05 16:44	
pH	pH Units	6.76	1-03	0.01	0.01
Alkalinity as CaCO3	mg/l	7		2	5
Bicarbonate	"	6		2	5
Carbonate		ND 6	1	2 2	5 10
Specific Conductance	umhos/cm		· ·		10
SKULL CAVE #1-3 (ICE) Water	(5050957-16)	Sampled:05/18/05 1		5/24/05 16:44	
рН	pH Units	7.86	1-03	0.01	0.01

Alkalinity as CaCO3	m	g/l 28		2	5
Bicarbonate		" 34		2	5
Carbonate		" ND		2	5
Specific Conductance	umho	os/cm 87		2	10
SKULL #4 A-B Water	(5050957-17) Sa	ampled:05/18/05 11:00	Received:05/24/05 16:44		
рН	pH (Units 7.41	1-03	0.01	0.01
Alkalinity as CaCO3	m	g/l 12		2	5

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

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1655 HEINDEN RD ARCATA, CA 95521 Attention: CHRIS CURRENS

Project: NPS-BASELINE WATER QUALITY INVENTORY LAVA BEDS

Analyte	Units	Results	Qualifier	MDL	RL
SKULL #4 A-B Water (5050957-	17) Sampled:0	5/18/05 11:00	Received:05/24/05 1	6:44	
Bicarbonate Carbonate	и и	15 ND		2 2	5 5
Specific Conductance SKULL #5 Water (5050957-18)	umhos/cm Sampled:05/18	40 3/05 11:00 Red	eived:05/24/05 16:44	2	10
pH	pH Units	7.57	1-03	0.01	0.01
Alkalinity as CaCO3	mg/l	18		2	5
Bicarbonate	II .	22		2	5
Carbonate	"	ND		2	5
Specific Conductance	umhos/cm	65		2	10
SKULL #6 Water (5050957-19)	Sampled:05/18	3/05 11:00 Red	eived:05/24/05 16:44	l .	
pH	pH Units	7.76	1-03	0.01	0.01
Alkalinity as CaCO3	mg/l	24		2	5
Bicarbonate	"	29		2	5
Carbonate		ND		2	5
Specific Conductance	umhos/cm	76		2	10
HEPPE #1 Water (5050957-20)	Sampled:05/18	3/05 14:00 Red	ceived:05/24/05 16:44	1	
рН	pH Units	7.23	I-03	0.01	0.01
Alkalinity as CaCO3	mg/l	29		2	5
Bicarbonate	II .	35		2	5
Carbonate	"	ND		2	5
Specific Conductance	umhos/cm	132		2	10
HEPPE #2 Water (5050957-21)	Sampled:05/18	3/05 14:00 Red	ceived:05/24/05 16:44	1	
pH	pH Units	7.26	1-03	0.01	0.01
Alkalinity as CaCO3	mg/l	29		2	5
Bicarbonate	II .	35		2	5
Carbonate	II .	ND		2	5
Specific Conductance	umhos/cm	125		2	10
HEPPE #3 Water (5050957-22)	Sampled:05/18	3/05 14:00 Red	ceived:05/24/05 16:44	1	
pH	pH Units	7.38	1-03	0.01	0.01
Alkalinity as CaCO3	mg/l	28		2	5
Bicarbonate	п	34		2	5
Carbonate	"	ND		2	5
Specific Conductance	umhos/cm	121		2	10
UPPER ICE CAVE #1 (ICE) Water	(5050957-23)	Sampled:05/18	3/05 16:00 Received	:05/24/05 16:4	4
рН	pH Units	6.88	1-03	0.01	0.01

Alkalinity as CaCO3		mg/l	22	2		5
Bicarbonate		· ·	27	2		5
Carbonate		II .	ND	2		5
Specific Conductance		umhos/cm	84	2		10
UPPER ICE CAVE #2 (ICE)	Water	(5050957-24)	Sampled:05/18/05 16:00	Received:05/24	/05 16:44	
pH		pH Units	6.39	I-03	0.01	0.01
Alkalinity as CaCO3		mg/l	10	2		5
Bicarbonate		II .	12	2		5
Carbonate		II .	ND	2		5
Specific Conductance		umhos/cm	66	2		10
UPPER ICE CAVE #3 (ICE)	Water	(5050957-25)	Sampled:05/18/05 16:00	Received:05/24	/05 16:44	
pH		pH Units	6.57	I-03	0.01	0.01
Alkalinity as CaCO3		mg/l	10	2		5
Bicarbonate		· ·	12	2		5

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Project: NPS-BASELINE WATER QUALITY INVENTORY LAVA BEDS

Analyte UPPER ICE CAVE #3 (ICE) Wa	Units ter (5050957-25		ialifier 00 Received	MDL d:05/24/05 16:4	RL 4
Carbonate Specific Conductance CALDWELL #4 (FLOOR) Water	umhos/cm (5050957-26)	ND 69 Sampled:05/18/05 18:00	Received:0	2 2 9 5/24/05 16:44	5 10
pH Alkalinity as CaCO3 Bicarbonate Carbonate Specific Conductance CALDWELL #5 (FLOOR) Water	pH Units mg/I " umhos/cm (5050957-27)	6.77 8 10 ND 19 Sampled:05/18/05 18:00	I-03 Received:0	0.01 2 2 2 2 2 2 95/24/05 16:44	0.01 5 5 5 10
pH Alkalinity as CaCO3 Bicarbonate Carbonate Specific Conductance CALDWELL #6 (FLOOR) Water	pH Units mg/l " " umhos/cm (5050957-28)	6.62 5 6 ND 16 Sampled:05/18/05 18:00	I-03 Received:0	0.01 2 2 2 2 2 2 95/24/05 16:44	0.01 5 5 5 10
pH Alkalinity as CaCO3 Bicarbonate Carbonate Specific Conductance COX #1 Water (5050957-29)	pH Units mg/l " umhos/cm Sampled:05/20	6.39 4 5 ND 12 0/05 09:00 Received:05/2	I-03 J 24/05 16:44	0.01 2 2 2 2 2	0.01 5 5 5 10
pH Alkalinity as CaCO3 Bicarbonate Carbonate Specific Conductance COX #2 Water (5050957-30) pH	pH Units mg/l " umhos/cm Sampled:05/20	6.50 5 6 ND 14 0/05 09:00 Received:05/2	I-03 2 4/05 16:44 I-03	0.01 2 2 2 2 2	0.01 5 5 5 10

Alkalinity as CaCO3	mg/l	5		2	5
Bicarbonate	"	5		2	5
Carbonate	··	ND		2	5
Specific Conductance	umhos/cm	12		2	10
COX #3 Water (5050957-31)	Sampled:05/2	20/05 09:00 Received:05/	24/05 16:44		
pH	pH Units	6.46	1-03	0.01	0.01
Alkalinity as CaCO3	mg/l	4	J	2	5
Bicarbonate	· ·	5		2	5
Carbonate	· ·	ND		2	5
Specific Conductance	umhos/cm	14		2	10
BIG PAINTED CAVE #1 Water	(5050957-32)	Sampled:05/19/05 11:00	Received:05/2	4/05 16:44	
pH	pH Units	6.81	1-03	0.01	0.01
Alkalinity as CaCO3	mg/l	5		2	5
-	mg/l	5 5		2 2	5 5
Alkalinity as CaCO3	mg/l	-		2 2 2	
Alkalinity as CaCO3 Bicarbonate	mg/l " " umhos/cm	5		2 2 2 2	5
Alkalinity as CaCO3 Bicarbonate Carbonate	n n	5 ND	Received:05/2	-	5 5
Alkalinity as CaCO3 Bicarbonate Carbonate Specific Conductance	umhos/cm	5 ND 14	Received:05/2	-	5 5
Alkalinity as CaCO3 Bicarbonate Carbonate Specific Conductance BIG PAINTED CAVE #2 Water	umhos/cm (5050957-33)	5 ND 14 Sampled:05/19/05 11:00		4/05 16:44	5 5 10
Alkalinity as CaCO3 Bicarbonate Carbonate Specific Conductance BIG PAINTED CAVE #2 Water pH	umhos/cm (5050957-33) pH Units	5 ND 14 Sampled:05/19/05 11:00 7.93		4/05 16:44	5 5 10 0.01

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

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1655 HEINDEN RD ARCATA, CA 95521 Attention: CHRIS CURRENS

Project: NPS-BASELINE WATER QUALITY INVENTORY LAVA BEDS

Analyte	Units	Resul	ts Qu	ıalifier	MDL	RL
BIG PAINTED CAVE #2 Water	(5050957-33)	Sampled:05/1	9/05 11:00	Received:05	5/24/05 16:4	14
Specific Conductance	umhos/cm	18			2	10
BIG PAINTED CAVE #3 Water	(5050957-34)	Sampled:05/1	9/05 11:00	Received:05	5/24/05 16:4	14
pH	pH Units	9.68		1-03	0.0	0.01
Alkalinity as CaCO3	mg/l	31			2	5
Bicarbonate	"	13			2	5
Carbonate	II .	12			2	5
Specific Conductance	umhos/cm	60			2	10
CRYSTAL CAVE-TOP LEVEL (ICE)	#1-2 Water	(5050957-35)	Sampled:05	/20/05 14:0	0 Received	:05/24/05 16:4
pH	pH Units	6.63		I-03	0.0	0.01
Alkalinity as CaCO3	mg/l	4		J	2	5
Bicarbonate	п	5			2	5
Carbonate	п	ND			2	5
Specific Conductance	umhos/cm	56			2	10
CRYSTAL CAVE #3-4 BLUE GLAC	IER (ICE) Wate	er (5050957-3	6) Sample	d:05/20/05 1	4:00 Recei	ved:05/24/05
pH	pH Units	6.49		I-03	0.0	0.01
Alkalinity as CaCO3	mg/l	3		J	2	5
Bicarbonate	п	4		J	2	5
Carbonate	II .	ND			2	5
Specific Conductance	umhos/cm	2		J	2	10
CRYSTAL CAVE #5 ICE RED (ICE) Water (505	0957-37) Sam	pled:05/20/	'05 14:00 R	eceived:05/2	24/05 16:44
рН	pH Units	7.03		I-03	0.0	0.01

Alkalinity as CaCO3	mg/l	11		2	5
Bicarbonate	"	13		2	5
Carbonate	"	ND		2	5
Specific Conductance	umhos/cm	31		2	10
CRYSTAL CAVE #6 ICE RED (ICE) Water (505	0957-38) Sampled:05/20	/05 14:00	Received:05/24	1/05 16:44
pH	pH Units	7.16	1-03	0.01	0.01
Alkalinity as CaCO3	mg/l	9		2	5
Bicarbonate	"	11		2	5
Carbonate	"	ND		2	5
Specific Conductance	umhos/cm	30		2	10
CALDWELL #1-3 (ICE) Water	(5050957-39)	Sampled:05/18/05 18:00	Received:	05/24/05 16:44	
pH	pH Units	7.92	1-03	0.01	0.01
Alkalinity as CaCO3	mg/l	16		2	5
Bicarbonate	"	20		2	5
Carbonate	II II	ND		2	5
Specific Conductance	umhos/cm	43		2	10

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Project: NPS-BASELINE WATER QUALITY INVENTORY LAVA BEDS

Quality Control Data

Analyte	Result	RL	Units	Spike Level	Source Result	%REC
			General C	hemistry		
Batch B5E0594 - Genera	al Prep - GC					
LCS						
рН	7.05		pH Units	7.00		101
Duplicate	Source: 5050941-01					
pН	7.34	0.01	pH Units		7.30	
Duplicate	Source: 5050957-10					
рН	6.43	0.01	pH Units		6.44	
Batch B5E0604 - Genera	al Prep - GC					
100						

LCS

pH		7.03		pH Units	7.00		100
Duplicate	Source: 5050957-20						
рН		7.24	0.01	pH Units		7.23	
Duplicate	Source: 5050957-30						
рН		6.57	0.01			6.49	
Batch B5E0646 - Genera	l Prep - GC						
Blank							
Specific Conductance		ND	10	umhos/cm			
LCS							
Specific Conductance		103		umhos/cm	100		103
Duplicate	Source: 5050941-01						
Specific Conductance		776	10	umhos/cm		772	
Duplicate	Source: 5050957-06						
Specific Conductance		46.0	10	umhos/cm		46	
Batch B5E0647 - Genera	l Prep - GC						
Blank							
Specific Conductance		ND	10	umhos/cm			
LCS							
Specific Conductance		103		umhos/cm	100		103
Duplicate	Source: 5050957-16						
Specific Conductance		87.0	10	umhos/cm		87	
Duplicate	Source: 5050957-26						
Specific Conductance							
		19.0	10	umhos/cm		19	
Batch B5E0649 - Genera	l Prep - GC	19.0	10	umhos/cm		19	
Batch B5E0649 - Genera	l Prep - GC	19.0	10	umhos/cm		19	
	l Prep - GC	19.0 ND	10	umhos/cm		19	
Blank	l Prep - GC					19	
Blank Specific Conductance	l Prep - GC				100	19	103

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1655 HEINDEN RD ARCATA, CA 95521 Attention: CHRIS CURRENS

Project: NPS-BASELINE WATER QUALITY INVENTORY LAVA BEDS

Quality Control Data

Analyte	Result	RL	Units	Spike Level	Source Result	%REC
			General Ch	nemistry		
Batch B5E0649 - Genera	al Prep - GC					
Duplicate	Source: 5050957-36					
Specific Conductance	2.00	10	umhos/cm		2	

Batch B5E0661 - General Prep - GC

Blank							
Alkalinity as CaCO3	NE	D	5	mg/l			
Bicarbonate	NI	D	5	mg/l			
Carbonate	NI	D	5	mg/l			
LCS							
Alkalinity as CaCO3	0.0	05		mg/l	0.0500		100
Duplicate	Source: 5050957-01						
Alkalinity as CaCO3	45.	5.0	5	mg/l		44	
Duplicate	Source: 5050957-12						
Alkalinity as CaCO3	22.	2.0	5	mg/l		21	
Batch B5E0662 - Genera	l Prep - GC						
Blank							
	NI	D	5	mg/l			
Blank	•			mg/l mg/l			
Blank Alkalinity as CaCO3	NI	D	5	-			
Blank Alkalinity as CaCO3 Bicarbonate	NI NI	D	5	mg/l			
Blank Alkalinity as CaCO3 Bicarbonate Carbonate	NI NI	D D	5 5	mg/l	0.0500		100
Blank Alkalinity as CaCO3 Bicarbonate Carbonate LCS	NI NI NI	D D	5 5	mg/l mg/l	0.0500		100
Blank Alkalinity as CaCO3 Bicarbonate Carbonate LCS Alkalinity as CaCO3	NI NI NI O.C	D D	5 5	mg/l mg/l	0.0500	29	100
Blank Alkalinity as CaCO3 Bicarbonate Carbonate LCS Alkalinity as CaCO3 Duplicate	NE NE 0.0 Source: 5050957-21	D D	5 5	mg/l mg/l mg/l	0.0500	29	100
Blank Alkalinity as CaCO3 Bicarbonate Carbonate LCS Alkalinity as CaCO3 Duplicate Alkalinity as CaCO3	NI NI NI 0.0 Source: 5050957-21	D D 05	5 5 5	mg/l mg/l mg/l	0.0500	29	100

Approved By

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

Report To: US GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521 Attention: CHRIS CURRENS

Project: NPS-BASELINE WATER QUALITY INVENTORY LAVA BEDS

Notes and Definitions

Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag). The J flag is equivalent to
 I-03 Sample was received past the EPA recommended holding time.
 DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the detection limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference
< Less than reporting limit

 \leq Less than or equal to reporting limit

> Greater than reporting limit

 \geq Greater than or equal to reporting limit

MDL Method Detection Limit

RL/ML Minimum Level of Quantitation

MCL/AL Maxium Contaminant Level/Action Level

mg/kg Results reported as wet weight
TTLC Total Threshold Limit Concentration
STLC Soluble Threshold Limit Concentration
TCLP Toxicity Characteristic Leachate Procedure

Approved By Basic Laboratory, Inc. California D.O.H.S. Cert #1677 **Lab No:** 5050957 **Reported:** 06/07/05

Phone: (707) 825-5189

Method	Analyzed	Prepared	Batch	
SM 4	I500H+	05/25/05	05/25/05	B5E0594
	05/27/05	05/27/05	B5E0661	
"		n n	"	
SM 2510B	05/26/05	05/26/05	B5E0646	
SM 4	1500H+	05/25/05	05/25/05	B5E0594
SM 2320B		05/27/05	B5E0661	
"	"	n n	"	
SM 2510B		05/26/05	B5E0646	
SM 4	1500H+	05/25/05	05/25/05	B5E0594
	05/27/05	05/27/05	B5E0661	
"	"	"	"	
SM 2510B	05/26/05	05/26/05	B5E0646	
SM 4	I500H+	05/25/05	05/25/05	B5E0594
SM 2320B		05/27/05	B5E0661	
n .	"	II .	п	
"	"	"	"	
SM 2510B	05/26/05	05/26/05	B5E0646	
SM 4	I500H+	05/25/05	05/25/05	B5E0594
SM 2320B	05/27/05	05/27/05	B5E0661	5020071
"		u.	u	
"	"	u .	u u	
SM 2510B	05/26/05	05/26/05	B5E0646	
SM 4	I500H+	05/25/05	05/25/05	B5E0594
SM 2320B		05/27/05	B5E0661	5020071
п	н	II .	п	
	п	п	п	"
SM 2510B	05/26/05	05/26/05	B5E0646	
SM /	I500H+	05/25/05	05/25/05	B5E0594
	05/27/05	05/25/05	B5E0661	D3E0394
"	"	"	"	
"	"	u u	u	
SM 2510B	05/26/05	05/26/05	B5E0646	
SIM /	I500H+	05/25/05	05/25/05	B5E0594
SM 2320B	05/27/05	05/27/05	B5E0661	2020074
"	"	u u	п	
	п	II .	п	
SM 2510B	05/26/05	05/26/05	B5E0646	
SM 4	I500H+	05/25/05	05/25/05	B5E0594

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Lab No: 5050957 **Reported:** 06/07/05

Phone: (707) 825-5189

Method	Analyzed	Prepared	Batch	
SM 2320B	05/27/05	05/27/05	B5E0661	
SM 2510B	05/26/05	05/26/05	B5E0646	
	4500H+ 2320B	05/25/05 05/27/05	05/25/05 05/27/05	B5E0594 B5E0661
	·	11	11	
SM 2510B	05/26/05	05/26/05	B5E0646	
SM - SM 2320B	4500H+ 05/27/05	05/25/05 05/27/05	05/25/05 B5E0661	B5E0594
"	"	11	п	
"	"	"	"	
SM 2510B	05/26/05	05/26/05	B5E0646	
SM -	4500H+	05/25/05	05/25/05	B5E0594
SM 2320B	05/27/05	05/27/05	B5E0661	
	·	11	11	
SM 2510B	05/26/05	05/26/05	B5E0646	
SM -	4500H+	05/25/05	05/25/05	B5E0594
SM	2320B	05/27/05	05/27/05	B5E0661
	"	" "	"	
SM	2510B	05/26/05	05/26/05	B5E0646
	4500H+	05/25/05	05/25/05	B5E0594
SIVI	2320B	05/27/05	05/27/05	B5E0661
	п	п	п	
SM 2510B	05/26/05	05/26/05	B5E0646	
21.1	450011	05/05/05	05/05/05	DEFOS.
SM 2320B	4500H+ 05/27/05	05/25/05 05/27/05	05/25/05 B5E0661	B5E0594
	и	u	u	
"	"	"	"	
SM	2510B	05/26/05	05/26/05	B5E0646
SM	4500H+	05/25/05	05/25/05	B5E0594

SM 2320B	05/27/05	05/27/05	B5E0661	
"	u u	II .	· ·	
II .	п	II .	п	
SM 2510B	05/26/05	05/26/05	B5E0647	
SM 45	500H+	05/25/05	05/25/05	B5E0594
SM 2320B	05/27/05	05/27/05	B5E0661	

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Lab No: 5050957 **Reported:** 06/07/05

Phone: (707) 825-5189

Method	Analyzed	Prepared	Batch	
	п	05/27/05	"	
	· ·	"	п	
SM 2510B	05/26/05	05/26/05	B5E0647	
SM A	4500H+	05/25/05	05/25/05	B5E0594
	05/27/05	05/27/05	B5E0661	D3E0374
	II .	"	"	
	"	п	п	
SM 2510B	05/26/05	05/26/05	B5E0647	
SM A	4500H+	05/25/05	05/25/05	B5E0594
	05/27/05	05/27/05	B5E0661	D3L0374
	· ·	"	"	
		II .		
SM 2510B	05/26/05	05/26/05	B5E0647	
SM 4	4500H+	05/25/05	05/25/05	B5E0604
	05/27/05	05/27/05	B5E0661	
	"		"	
SM 2510B	05/26/05	05/26/05	B5E0647	
	4500H+	05/25/05	05/25/05	B5E0604
SM 2320B	05/27/05	05/27/05	B5E0662	
u u	п	п	п	
SM 2510B	05/26/05	05/26/05	B5E0647	
CM	450011	05/25/05	05/25/05	DEE0/04
	4500H+ 05/27/05	05/25/05 05/27/05	05/25/05 B5E0662	B5E0604
"	U3/21/U3 "	II .	ш	
		II .	п	
SM 2510B	05/26/05	05/26/05	B5E0647	
SM 4	4500H+	05/25/05	05/25/05	B5E0604

SM 2320B	05/27/05	05/27/05	B5E0662	
"	"		II .	
"	п	п	· ·	
SM 2510B	05/26/05	05/26/05	B5E0647	
SM 4	500H+	05/25/05	05/25/05	B5E0604
SM 2320B	05/27/05	05/27/05	B5E0662	
"	n .		II .	
	п	u u	· ·	
SM 2510B	05/26/05	05/26/05	B5E0647	
SM 4	500H+	05/25/05	05/25/05	B5E0604
SM 2320B	05/27/05	05/27/05	B5E0662	
II .	II .	u u	II .	

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5050957 Lab No: Reported: 06/07/05 Phone:

(707) 825-5189

Method	Analyzed	Prepared	Batch	
п		05/27/05	п	
SM 2510B	05/26/05	05/26/05	B5E0647	
	4500H+	05/25/05	05/25/05	B5E0604
SM 2320B	05/27/05	05/27/05	B5E0662	
		u u		
SM 2510B	05/26/05	05/26/05	B5E0647	
SM 4	4500H+	05/25/05	05/25/05	B5E0604
SM 2320B	05/27/05	05/27/05	B5E0662	
		n.		
SM 2510B	05/26/05	05/26/05	B5E0647	
SM 4	4500H+	05/25/05	05/25/05	B5E0604
	2320B	05/27/05	05/27/05	B5E0662
"		n n	"	
SM 2510B	05/26/05	05/26/05	B5E0647	
SM.	4500H+	05/25/05	05/25/05	B5F0604
SM 2320B	05/27/05	05/27/05	B5E0662	D3L0004
"		u	· ·	
" CM 0540D	"	"	" DEFO(47	
SM 2510B	05/26/05	05/26/05	B5E0647	
SM 4	4500H+	05/25/05	05/25/05	B5E0604

SM 2320B	05/27/05	05/27/05	B5E0662	
	"			
"	"	II	"	
SM 2510B	05/26/05	05/26/05	B5E0647	
SM 4	500H+	05/25/05	05/25/05	B5E0604
SM :	2320B	05/27/05	05/27/05	B5E0662
II .	II .	п	n n	
	m .	п	u u	
SM 2510B	05/26/05	05/26/05	B5E0647	
SM 4	500H+	05/25/05	05/25/05	B5E0604
				D3L0004
SM 2320B	05/27/05	05/27/05	B5E0662	
SM 2510B	05/26/05	05/26/05	B5E0647	
SM 4	500H+	05/25/05	05/25/05	B5E0604
SM 2320B	05/27/05	05/27/05	B5E0662	
11		II .		
	n .	II .	ш	

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Lab No: 5050957 **Reported:** 06/07/05

Phone: (707) 825-5189

Method	Analyzed	Prepared	Batch	
SM 2510B	05/26/05	05/26/05	B5E0647	
SM -	4500H+	05/25/05	05/25/05	B5E0604
SM 2320B	05/27/05	05/27/05	B5E0662	
"	"	II .	п	
"	"	II .	п	
SM 2510B	05/26/05	05/26/05	B5E0647	
14				
SM ·	4500H+	05/25/05	05/25/05	B5E0604
SM	2320B	05/27/05	05/27/05	B5E0662
"	"	u .	п	
"	··	u	u	
SM 2510B	05/26/05	05/26/05	B5E0647	
16:44				
SM -	4500H+	05/25/05	05/25/05	B5E0604
SM	2320B	05/27/05	05/27/05	B5E0662
	п	II .	п	"
	II .	п	п	
SM	2510B	05/26/05	05/26/05	B5E0649
SM -	4500H+	05/25/05	05/25/05	B5E0604

SM 2320B	05/27/05	05/27/05	B5E0662	
	II .	п	п	
II .	п	п	н	
SM 2510B	05/26/05	05/26/05	B5E0649	
SM 4	500H+	05/25/05	05/25/05	B5E0604
SM 2320B	05/27/05	05/27/05	B5E0662	
п	ш	n .	"	
SM 2510B	05/26/05	05/26/05	B5E0649	
SM 4	500H+	05/25/05	05/25/05	B5E0604
SM 2320B	05/27/05	05/27/05	B5E0662	
"	II .	II .	u u	
u .	u	п	m m	
SM 2510B	05/26/05	05/26/05	B5E0649	

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Lab No: 5050957 **Reported:** 06/07/05

Phone: (707) 825-5189

P.O. #

%REC RPD
Limits RPD Limit Qualifier

80-120

20

0.546

0.155 20

80-120

0.138 20

1.23 20

80-120

0.517 20

0.00 20

80-120

0.00 20

0.00 20

80-120

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 Lab No:
 5050957

 Reported:
 06/07/05

Phone: (707) 825-5189

P.O. #

%REC RPD

Limits RPD Limit Qualifier

0.00 20 J

80-120

2.25 20

4.65 20

80-120

0.00 20

0.00 20 J

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Lab No: 5050957 **Reported:** 06/07/05

Phone: (707) 825-5189

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION Lab No:

1655 HEINDEN RD Ro

ARCATA, CA 95521 Phone:

Attention: CHRIS CURRENS P.O. #

Project: NPS - BASELINE WATER QUALITY INVENTORY

Analyte	Un	its Results	Qual	lifier	MDL	RL	Method	Analyzed
HEPPE ICE #1 Water	(5100894-01)	Sampled:10/24/0	5 17:00	Receive	d:10/28/0	05 13:4	9	
pН	pH L	Jnits 7.86		I-03	0.01	0.01	SM 45	500H+
Alkalinity as CaCO3	mç	g/l 42			2	5	SM 2320B	10/31/05
Bicarbonate		52			2	5		· ·
Carbonate	11	ND			2	5	п	"
Hydroxide		ND			2	5	n .	п
Specific Conductance	umho	os/cm 358			2	10	SM 2510B	11/07/05
HEPPE ICE #2 Water	(5100894-02)	Sampled:10/24/0	5 17:00	Receive	d:10/28/0	05 13:4	9	
рН	рΗ С	Jnits 7.89		I-03	0.01	0.01	SM 45	600H+
Alkalinity as CaCO3	mç	g/l 42			2	5	SM 2320B	10/31/05
Bicarbonate		52			2	5	"	"
Carbonate	11	ND			2	5	"	
Hydroxide	ı	ND ND			2	5	"	
Specific Conductance	umho	s/cm 348			2	10	SM 2510B	11/07/05
HEPPE ICE #3 Water	(5100894-03) S	Sampled:10/24/0	5 17:00	Receive	d:10/28/0	05 13:4	9	
рН	pH L	Jnits 7.86		I-03	0.01	0.01	SM 45	600H+
Alkalinity as CaCO3	mç	g/l 42			2	5	SM 2320B	10/31/05
Bicarbonate		52			2	5		п
Carbonate		' ND			2	5		п
Hydroxide	11	ND			2	5		
Specific Conductance	umho	s/cm 348			2	10	SM 2510B	11/07/05
CALDWELL ICE WALL (Composite of #1-3) Water (51008	394-04)	Sample	d:10/25/0	5 09:0	0 Receive	ed:10/28/05 1
рН	pH L	Jnits 7.16		I-03	0.01	0.01	SM 45	600H+
Alkalinity as CaCO3	mç	g/l 15			2	5	SM 2320B	11/08/05
Bicarbonate		18			2	5	"	n .

Carbonate		"	ND		2	5	п	п
Hydroxide			ND		2	5	"	"
Specific Conductance	/=4	umhos/cm	41		2	10	SM 2510B	11/07/05
CALDWELL FLOOR #4	Water (51	00894-05)	Sampled:10/2		Received:			
pH		pH Units	6.34	1-03	0.01	0.01		
Alkalinity as CaCO3		mg/l "	ND		2 2	5 5	SM 2320B	11/08/05
Bicarbonate Carbonate			ND ND		2	5 5		
Hydroxide			ND		2	5	"	
Specific Conductance		umhos/cm	15		2	10	SM 2510B	11/03/05
CALDWELL FLOOR #5	Water (51	00894-06)	Sampled:10/2	25/05 09:00	Received:	10/28/	05 13:49	
рН		pH Units	6.40	1-03	0.01	0.01	SM 45	600H+
Alkalinity as CaCO3		mg/l	4	J	2	5	SM 2	320B
Bicarbonate		"	5		2	5	"	"
Carbonate		"	ND		2	5	"	
Hydroxide Specific Conductance		umhos/cm	ND 20		2 2	5 10	SM 2510B	11/03/05
-	(5100894-07)		:10/25/05 11:3	30 Pacaivad	:10/28/05		3W 23 TOD	11/03/03
pH	(31000)4 07	pH Units	6.60	I-03	0.01	0.01	SM 45	:00H :
Alkalinity as CaCO3		mg/l	4	1-03 J	2	5		320B
Bicarbonate		"	5	_	2	5	"	"
Carbonate		· ·	ND		2	5	II .	
Hydroxide		"	ND		2	5	"	"
Specific Conductance		umhos/cm	18		2	10	SM 2510B	11/03/05
COX ICE #2 Water	(5100894-08)) Sampled	:10/25/05 11:3	30 Received	:10/28/05	13:49		
pH		pH Units	6.56	I-03	0.01	0.01	SM 45	600H+
Analyte		Units	Results	Qualifier	MDL	RL	Method	Analyzed
COX ICE #2 Water	(5100894-08)) Sampled	:10/25/05 11:3	30 Received	:10/28/05	13:49		
Alkalinity as CaCO3		mg/l	4	J	2	5	SM 2	320B
Alkalinity as CaCO3 Bicarbonate		mg/l "	4 5	J	2	5 5	SM 2	320B
Bicarbonate Carbonate		11	5 ND	J	2 2	5 5	"	11
Bicarbonate Carbonate Hydroxide		n n	5 ND ND	J	2 2 2	5 5 5	11 11	" "
Bicarbonate Carbonate Hydroxide Specific Conductance	(510089 /_00)	" " umhos/cm	5 ND ND 18		2 2 2 2	5 5 5 10	"	11
Bicarbonate Carbonate Hydroxide Specific Conductance COX ICE #3 Water	(5100894-09)	umhos/cm	5 ND ND 18 :10/25/05 11:3	30 Received	2 2 2 2 : 10/28/05	5 5 5 10 13:49	" " SM 2510B	" " 11/03/05
Bicarbonate Carbonate Hydroxide Specific Conductance COX ICE #3 Water pH	(5100894-09)	umhos/cm) Sampled pH Units	5 ND ND 18 :10/25/05 11:3	30 Received	2 2 2 2:10/28/05	5 5 5 10 13:49 0.01	" " SM 2510B	" " 11/03/05 500H+
Bicarbonate Carbonate Hydroxide Specific Conductance COX ICE #3 Water pH Alkalinity as CaCO3	(5100894-09)	umhos/cm	5 ND ND 18 :10/25/05 11:3	30 Received	2 2 2 2 : 10/28/05	5 5 5 10 13:49	" " SM 2510B	" " 11/03/05
Bicarbonate Carbonate Hydroxide Specific Conductance COX ICE #3 Water pH	(5100894-09)	umhos/cm) Sampled pH Units	5 ND ND 18 :10/25/05 11:3	30 Received	2 2 2 2 : 10/28/05 0.01 2	5 5 10 13:49 0.01	" " SM 2510B	" " 11/03/05 500H+
Bicarbonate Carbonate Hydroxide Specific Conductance COX ICE #3 Water pH Alkalinity as CaCO3 Bicarbonate	(5100894-09)	umhos/cm) Sampled pH Units mg/I "	5 ND ND 18 :10/25/05 11:3 6.42 3 3	30 Received	2 2 2 2 2:10/28/05 0.01 2 2	5 5 10 13:49 0.01 5 5	" " SM 2510B SM 45 SM 2	" " 11/03/05 500H+ 320B
Bicarbonate Carbonate Hydroxide Specific Conductance COX ICE #3 Water pH Alkalinity as CaCO3 Bicarbonate Carbonate	(5100894-09)	umhos/cm) Sampled pH Units mg/I "	5 ND ND 18 :10/25/05 11:3 6.42 3 3 ND	30 Received	2 2 2 2 2:10/28/05 0.01 2 2	5 5 10 13:49 0.01 5 5	" " SM 2510B SM 45 SM 2	" " 11/03/05 500H+ 320B
Bicarbonate Carbonate Hydroxide Specific Conductance COX ICE #3 Water pH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide		umhos/cm Sampled pH Units mg/I " umhos/cm	5 ND ND 18 :10/25/05 11:3 6.42 3 3 ND ND	30 Received I-03 J J	2 2 2 2 2:10/28/05 0.01 2 2 2	5 5 5 10 13:49 0.01 5 5 5	SM 2510B SM 45 SM 2 SM 2 SM 2510B	" " 11/03/05 500H+ 320B "
Bicarbonate Carbonate Hydroxide Specific Conductance COX ICE #3 Water pH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance UPPER ICE #1 Water pH		umhos/cm) Sampled pH Units mg/I " umhos/cm 10) Sampl pH Units	5 ND 18 :10/25/05 11:: 6.42 3 ND ND 14 ed:10/25/05 1	30 Received I-03 J J	2 2 2 2:10/28/05 0.01 2 2 2 2 2 2 2ed:10/28/0	5 5 5 10 13:49 0.01 5 5 5 10 05 13:4 0.01	SM 2510B SM 45 SM 2 SM 2 SM 2510B SM 2510B 9	" 11/03/05 500H+ 320B " 11/03/05
Bicarbonate Carbonate Hydroxide Specific Conductance COX ICE #3 Water pH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance UPPER ICE #1 Water pH Alkalinity as CaCO3		umhos/cm) Sampled pH Units mg/I " umhos/cm 10) Sampl pH Units mg/I	5 ND ND 18 :10/25/05 11:: 6.42 3 ND ND ND 14 ed:10/25/05 1	30 Received I-03 J J 4:00 Receiv	2 2 2 2 2:10/28/05 0.01 2 2 2 2 2 2 2 2ed:10/28/0	5 5 5 10 13:49 0.01 5 5 5 10 05 13:4 0.01	SM 2510B SM 45 SM 2 SM 2510B SM 2510B SM 2510B	" " " " " " 11/03/05 500H+ 320B " " " " 11/03/05 500H+ 11/08/05
Bicarbonate Carbonate Hydroxide Specific Conductance COX ICE #3 Water pH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance UPPER ICE #1 Water pH Alkalinity as CaCO3 Bicarbonate		umhos/cm) Sampled pH Units mg/I " umhos/cm 10) Sampl pH Units	5 ND 18 :10/25/05 11:: 6.42 3 ND ND ND 14 ed:10/25/05 1 7.47 41 50	30 Received I-03 J J 4:00 Receiv	2 2 2 2 2:10/28/05 0.01 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 5 5 10 13:49 0.01 5 5 5 10 05 13:4 0.01 5	SM 2510B SM 45 SM 2 SM 2 SM 2510B SM 2510B 9	" 11/03/05 500H+ 320B " 11/03/05
Bicarbonate Carbonate Hydroxide Specific Conductance COX ICE #3 Water pH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance UPPER ICE #1 Water pH Alkalinity as CaCO3 Bicarbonate Carbonate Carbonate		umhos/cm) Sampled pH Units mg/l " umhos/cm 10) Sampl pH Units mg/l "	5 ND ND 18 :10/25/05 11:: 6.42 3 ND ND ND 14 ed:10/25/05 1 7.47 41 50 ND	30 Received I-03 J J 4:00 Receiv	2 2 2 2 2:10/28/05 0.01 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 5 5 10 13:49 0.01 5 5 5 10 05 13:4 0.01 5 5	SM 2510B SM 45 SM 2 SM 2510B SM 2510B SM 2510B SM 2320B "	11/03/05 300H+ 320B 11/03/05 300H+ 11/08/05
Bicarbonate Carbonate Hydroxide Specific Conductance COX ICE #3 Water pH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance UPPER ICE #1 Water pH Alkalinity as CaCO3 Bicarbonate		umhos/cm) Sampled pH Units mg/l " umhos/cm 10) Sampl pH Units mg/l " "	5 ND 18 :10/25/05 11:: 6.42 3 ND ND ND 14 ed:10/25/05 1 7.47 41 50	30 Received I-03 J J 4:00 Receiv	2 2 2 2 2:10/28/05 0.01 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 5 5 10 13:49 0.01 5 5 5 10 05 13:4 0.01 5	SM 2510B SM 45 SM 2 SM 2510B SM 2510B SM 2510B SM 2320B "	" " " " " " " " " " " " " " " " " " "
Bicarbonate Carbonate Hydroxide Specific Conductance COX ICE #3 Water pH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance UPPER ICE #1 Water pH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide	· (5100894-	umhos/cm) Sampled pH Units mg/I " umhos/cm 10) Sampl pH Units mg/I " " umhos/cm	5 ND ND 18 :10/25/05 11:: 6.42 3 ND ND ND 14 ed:10/25/05 1 7.47 41 50 ND ND	I-03 J J 4:00 Receiv	2 2 2 2 2:10/28/05 0.01 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 5 5 10 13:49 0.01 5 5 5 10 05 13:4 0.01 5 5 5	SM 2510B SM 45 SM 2 " " SM 2510B 9 SM 45 SM 2320B " " " SM 2510B	" " " " " " " " " " " " " " " " " " "
Bicarbonate Carbonate Hydroxide Specific Conductance COX ICE #3 Water pH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance UPPER ICE #1 Water pH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance	· (5100894-	umhos/cm) Sampled pH Units mg/I " umhos/cm 10) Sampl pH Units mg/I " " umhos/cm	5 ND ND 18 :10/25/05 11:: 6.42 3 ND ND 14 ed:10/25/05 1 7.47 41 50 ND ND ND	I-03 J J 4:00 Receiv	2 2 2 2 2:10/28/05 0.01 2 2 2 2ed:10/28/0 0.01 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 5 5 10 13:49 0.01 5 5 5 10 05 13:4 0.01 5 5 5	SM 2510B SM 45 SM 2 " SM 2510B SM 2510B SM 2320B " SM 2320B	11/03/05 500H+ 320B 11/03/05 500H+ 11/08/05 " 11/07/05
Bicarbonate Carbonate Hydroxide Specific Conductance COX ICE #3 Water pH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance UPPER ICE #1 Water pH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance UPPER ICE #2 Water	· (5100894-	umhos/cm) Sampled pH Units mg/l " umhos/cm 10) Sampl pH Units mg/l " " umhos/cm 11) Sampl	5 ND ND 18 :10/25/05 11:3 6.42 3 3 ND ND 14 ed:10/25/05 1 7.47 41 50 ND ND ND 136 ed:10/25/05 1	30 Received -03	2 2 2 2 2 3:10/28/05 0.01 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 5 5 10 13:49 0.01 5 5 5 10 05 13:4 0.01 5 5 5 5 10	SM 2510B SM 45 SM 2 " SM 2510B SM 2510B SM 2320B " SM 2320B	11/03/05 500H+ 320B 11/03/05 500H+ 11/08/05 " 11/07/05
Bicarbonate Carbonate Hydroxide Specific Conductance COX ICE #3 Water pH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance UPPER ICE #1 Water pH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance UPPER ICE #2 Water pH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance UPPER ICE #2 Water pH Alkalinity as CaCO3 Bicarbonate	· (5100894-	umhos/cm) Sampled pH Units mg/l " " umhos/cm 10) Sampl pH Units mg/l " umhos/cm 11) Sampl pH Units	5 ND ND 18 :10/25/05 11:3 6.42 3 3 ND ND 14 ed:10/25/05 1 7.47 41 50 ND ND ND 136 ed:10/25/05 1 7.67 32 38	30 Received -03	2 2 2 2 2 3:10/28/05 0.01 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 5 5 10 13:49 0.01 5 5 5 10 05 13:4 0.01 5 5 5 5 10 05 13:4 0.01 5 5 5 5 5 5 5 5 7 7 8 9 10 10 10 10 10 10 10 10 10 10 10 10 10	SM 2510B SM 45 SM 2 " SM 2510B SM 2510B SM 2320B " SM 2510B SM 2320B " SM 2510B	" " 11/03/05 500H+ 320B " " 11/03/05 500H+ 11/08/05 " " 11/07/05
Bicarbonate Carbonate Hydroxide Specific Conductance COX ICE #3 Water pH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance UPPER ICE #1 Water pH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance UPPER ICE #2 Water pH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance UPPER ICE #2 Water pH Alkalinity as CaCO3 Bicarbonate Carbonate	· (5100894-	umhos/cm) Sampled pH Units mg/l " " umhos/cm 10) Sampl pH Units mg/l " umhos/cm 11) Sampl pH Units	5 ND ND 18 :10/25/05 11:3 6.42 3 3 ND ND 14 ed:10/25/05 1 7.47 41 50 ND ND 136 ed:10/25/05 1 7.67 32 38 ND	30 Received -03	2 2 2 2 2 3:10/28/05 0.01 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 5 5 10 13:49 0.01 5 5 5 10 05 13:4 0.01 5 5 5 5 5 5 005 13:4	SM 2510B SM 45 SM 2 " SM 2510B 9 SM 2510B 9 SM 2510B 9 SM 2320B " SM 2510B	11/03/05 500H+ 320B 11/03/05 500H+ 11/08/05 11/07/05 500H+ 11/08/05 """
Bicarbonate Carbonate Hydroxide Specific Conductance COX ICE #3 Water pH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance UPPER ICE #1 Water pH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance UPPER ICE #2 Water pH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance UPPER ICE #2 Water pH Alkalinity as CaCO3 Bicarbonate Carbonate Carbonate Hydroxide	· (5100894-	umhos/cm) Sampled pH Units mg/l " " umhos/cm 10) Sampl pH Units mg/l " " umhos/cm 11) Sampl pH Units	5 ND ND 18 :10/25/05 11:3 6.42 3 3 ND ND 14 ed:10/25/05 1 7.47 41 50 ND ND ND 136 ed:10/25/05 1 7.67 32 38 ND ND	30 Received -03	2 2 2 2 2 3:10/28/05 0.01 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 5 5 10 13:49 0.01 5 5 10 05 13:4 0.01 5 5 5 5 10 05 13:4 0.01 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	SM 2510B SM 45 SM 2 SM 2510B SM 2510B SM 2510B SM 2320B SM 2320B SM 2510B SM 2320B	11/03/05 300H+ 320B 11/03/05 300H+ 11/08/05 11/07/05 300H+ 11/08/05 """ 11/08/05 """ 11/08/05
Bicarbonate Carbonate Hydroxide Specific Conductance COX ICE #3 Water pH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance UPPER ICE #1 Water pH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance UPPER ICE #2 Water pH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance UPPER ICE #2 Water pH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance	· (5100894- · (5100894-	umhos/cm) Sampled pH Units mg/l " umhos/cm 10) Sampl pH Units mg/l " umhos/cm 11) Sampl pH Units mg/l " " umhos/cm	5 ND ND 18 :10/25/05 11:3 6.42 3 3 ND ND 14 ed:10/25/05 1 7.47 41 50 ND ND 136 ed:10/25/05 1 7.67 32 38 ND ND ND 136	30 Received -03	2 2 2 2 2 3:10/28/05 0.01 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 5 5 10 13:49 0.01 5 5 5 10 05 13:4 0.01 5 5 5 5 5 10 0.01 5 5 5 5 5 5 5 5 5 7 0.01 5 5 5 5 7 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.	SM 2510B SM 45 SM 2 SM 2510B SM 2510B SM 2510B SM 2320B SM 2510B SM 2320B SM 2510B SM 2320B	11/03/05 500H+ 320B 11/03/05 500H+ 11/08/05 11/07/05 500H+ 11/08/05 """ 11/08/05
Bicarbonate Carbonate Hydroxide Specific Conductance COX ICE #3 Water pH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance UPPER ICE #1 Water pH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance UPPER ICE #2 Water pH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance UPPER ICE #2 Water pH Alkalinity as CaCO3 Bicarbonate Carbonate Specific Conductance UPPER ICE #3 Water	· (5100894- · (5100894-	umhos/cm) Sampled pH Units mg/l " " umhos/cm 10) Sampl pH Units mg/l " " umhos/cm 11) Sampl pH Units mg/l " " umhos/cm 12) Sampl	5 ND ND 18 :10/25/05 11:: 6.42 3 3 ND ND 14 ed:10/25/05 1 7.47 41 50 ND ND ND 136 ed:10/25/05 1 7.67 32 38 ND ND 121 ed:10/25/05 1	30 Received -03	2 2 2 2 2 3 10/28/05 0.01 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 5 5 10 13:49 0.01 5 5 5 10 05 13:4 0.01 5 5 5 10 05 13:4 0.01	SM 2510B SM 45 SM 2510B 9 SM 2510B 9 SM 2510B 9 SM 2320B " " " SM 2510B 9 SM 2510B 9 SM 2510B	" " " 11/03/05 300H+ 320B " " 11/03/05 300H+ 11/08/05 " " 11/07/05
Bicarbonate Carbonate Hydroxide Specific Conductance COX ICE #3 Water pH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance UPPER ICE #1 Water pH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance UPPER ICE #2 Water pH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance UPPER ICE #2 Water pH Alkalinity as CaCO3 Bicarbonate Carbonate Carbonate UPPER ICE #3 Water pH	· (5100894- · (5100894-	umhos/cm) Sampled pH Units mg/I " umhos/cm 10) Sampl pH Units mg/I " umhos/cm 11) Sampl pH Units mg/I " " umhos/cm 11) Sampl pH Units mg/I " " umhos/cm 12) Sampl pH Units	5 ND ND 18 :10/25/05 11:3 6.42 3 3 ND ND 14 ed:10/25/05 1 7.47 41 50 ND ND 136 ed:10/25/05 1 7.67 32 38 ND ND ND 136	30 Received -03	2 2 2 2 2 3 10/28/05 0.01 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 5 5 10 13:49 0.01 5 5 5 10 05 13:4 0.01 5 5 5 10 05 13:4 0.01 5 5 5 10 0.01 5 5 5 5 5 5 5 5 5 5 5 5 5	SM 2510B SM 45 SM 2510B SM 2510B SM 2510B SM 2320B SM 2320B SM 2510B SM 2510B SM 2510B SM 2510B	" " " " " " " " " " " " " " " " " " "
Bicarbonate Carbonate Hydroxide Specific Conductance COX ICE #3 Water pH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance UPPER ICE #1 Water pH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance UPPER ICE #2 Water pH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance UPPER ICE #2 Water pH Alkalinity as CaCO3 Bicarbonate Carbonate Specific Conductance UPPER ICE #3 Water	· (5100894- · (5100894-	umhos/cm) Sampled pH Units mg/l " " umhos/cm 10) Sampl pH Units mg/l " " umhos/cm 11) Sampl pH Units mg/l " " umhos/cm 12) Sampl	5 ND ND 18 :10/25/05 11:: 6.42 3 3 ND ND 14 ed:10/25/05 1 7.47 41 50 ND ND 136 ed:10/25/05 1 7.67 32 38 ND ND 121 ed:10/25/05 1	30 Received -03	2 2 2 2 2 3 10/28/05 0.01 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 5 5 10 13:49 0.01 5 5 5 10 05 13:4 0.01 5 5 5 10 05 13:4 0.01	SM 2510B SM 45 SM 2510B 9 SM 2510B 9 SM 2510B 9 SM 2320B " " " SM 2510B 9 SM 2510B 9 SM 2510B	" " " 11/03/05 300H+ 320B " " 11/03/05 300H+ 11/08/05 " " 11/07/05

Carbonate		"	ND		2	5	п	п
Hydroxide		u u	ND		2	5	"	"
Specific Conductance		umhos/cm			2	10	SM 2510B	11/07/05
MERRILL ICE #1 Wa	ter	(5100894-13) Sa	ampled:10/25/	05 16:00 R	eceived:10/2	8/05	13:49	
pH		pH Units	6.61	I-03	0.01			500H+
Alkalinity as CaCO3		mg/l	4	J	2		5 SM 2	:320B "
Bicarbonate Carbonate		п	5 ND		2 2	5 5		
Hydroxide			ND		2	5		
Specific Conductance		umhos/cm			2	10	SM 2510B	11/03/05
MERRILL ICE #2-3 V	Vater	(5100894-14)	Sampled:10/2	5/05 16:00	Received:10	/28/0	5 13:49	
рН		pH Units	6.69	1-03	0.01	0.	.01 SM 45	500H+
Alkalinity as CaCO3		mg/l	5		2	5	SM 2320B	11/08/05
Bicarbonate		· ·	5		2	5	"	"
Carbonate		"	ND		2	5	"	
Hydroxide		"	ND		2 2	5		
Specific Conductance		umhos/cm		- /OF 4/ · OO		10	SM 2510B	11/03/05
MERRILL POOL #5 V	vater	-	Sampled: 10/25		Received:10			
pH		pH Units	8.34	I-03	0.01			500H+
Alkalinity as CaCO3		mg/l	114		2	5	SM 2320B	11/08/05
General Chemistr	У							
Analyte		Units	Results	Qualifier	MDL	RL	Method	Analyzed
MERRILL POOL #5 V	Vater	(5100894-15)	Sampled: 10/25	5/05 16:00	Received: 10	/28/0	5 13:49	
Bicarbonate		II .	139		2	5	"	"
Carbonate		ш	ND		2	5	n n	
Hydroxide		"	ND		2	5	"	"
Specific Conductance		umhos/cm			2	10	SM 2510B	11/07/05
MERRILL POOL #6 V	Vater	(5100894-16)	Sampled: 10/25	5/05 16:00	Received: 10	/28/0	5 13:49	
pH		pH Units	8.31	1-03	0.01			500H+
Alkalinity as CaCO3		mg/l	115	1-03	0.01 2	5	SM 2320B	11/08/05
Alkalinity as CaCO3 Bicarbonate		•	115 140	I-03	0.01 2 2	5 5		
Alkalinity as CaCO3 Bicarbonate Carbonate		mg/l	115 140 ND	I-03	0.01 2 2 2	5 5 5	SM 2320B	11/08/05
Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide		mg/l	115 140 ND ND	I-03	0.01 2 2	5 5	SM 2320B	11/08/05
Alkalinity as CaCO3 Bicarbonate Carbonate	Vater	mg/l " " " umhos/cm	115 140 ND ND ND		0.01 2 2 2 2 2 2	5 5 5 5	SM 2320B " " " SM 2510B	11/08/05
Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance MERRILL POOL #7	Vater	mg/l " " umhos/cm (5100894-17)	115 140 ND ND 1 266 Sampled:10/25	5/05 16:00	0.01 2 2 2 2 2 2 2 Received:10	5 5 5 10 /28/0	SM 2320B " " SM 2510B 5 13:49	11/08/05 " " " 11/07/05
Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance MERRILL POOL #7 PH	Vater	mg/l " umhos/cm (5100894-17) pH Units	115 140 ND ND 1 266 Sampled:10/25		0.01 2 2 2 2 2 2 Received:10	5 5 5 10 /28/0 0.	SM 2320B " " SM 2510B 5 13:49 .01 SM 45	11/08/05 " " " 11/07/05
Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance MERRILL POOL #7	Vater	mg/l " " umhos/cm (5100894-17)	115 140 ND ND 1 266 Sampled:10/25	5/05 16:00	0.01 2 2 2 2 2 2 2 Received:10	5 5 5 10 /28/0	SM 2320B " " SM 2510B 5 13:49	11/08/05 " " " 11/07/05
Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance MERRILL POOL #7 PH Alkalinity as CaCO3	Vater	mg/l " umhos/cm (5100894-17) pH Units mg/l	115 140 ND ND 1 266 Sampled:10/25 8.32 116	5/05 16:00	0.01 2 2 2 2 2 2 Received:10 0.01 2	5 5 5 10 /28/0 0.	SM 2320B " " " SM 2510B 5 13:49 01 SM 45 SM 2320B	11/08/05 " " " 11/07/05 500H+ 11/08/05
Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance MERRILL POOL #7 V pH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide	Vater	mg/l " umhos/cm (5100894-17) pH Units mg/l "	115 140 ND ND 1 266 Sampled:10/25 8.32 116 142 ND	5/05 16:00	0.01 2 2 2 2 2 2 Received:10 0.01 2 2 2 2	5 5 5 10 /28/0 0. 5 5 5	SM 2320B " SM 2510B 5 13:49 .01 SM 45 SM 2320B " "	11/08/05 " " 11/07/05 500H+ 11/08/05 " "
Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance MERRILL POOL #7 PH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance		mg/l " umhos/cm (5100894-17) pH Units mg/l " " umhos/cm	115 140 ND ND 266 Sampled:10/25 8.32 116 142 ND ND	5 /05 16:00 I-03	0.01 2 2 2 2 2 2 Received:10 0.01 2 2 2 2	5 5 5 10 /28/0 0. 5 5 5 5	SM 2320B " SM 2510B 5 13:49 .01 SM 45 SM 2320B " SM 2510B	11/08/05 " " 11/07/05 500H+ 11/08/05 "
Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance MERRILL POOL #7 V pH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide		mg/l " umhos/cm (5100894-17) pH Units mg/l " umhos/cm (5100894-18)	115 140 ND ND 266 Sampled:10/25 8.32 116 142 ND ND	5 /05 16:00 I-03	0.01 2 2 2 2 2 2 Received:10 0.01 2 2 2 2	5 5 5 10 /28/0 0. 5 5 5 10	SM 2320B " SM 2510B 5 13:49 .01 SM 45 SM 2320B " SM 2510B	11/08/05 " " 11/07/05 500H+ 11/08/05 " "
Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance MERRILL POOL #7 V pH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance BLUE GLACIER #3 W pH		mg/l " umhos/cm (5100894-17) pH Units mg/l " umhos/cm (5100894-18)	115 140 ND ND 266 Sampled:10/25 8.32 116 142 ND ND 256 Sampled:10/26	5 /05 16:00 I-03	0.01 2 2 2 2 2 Received:10 0.01 2 2 2 2 2 Received:10/ 0.01	5 5 5 10 /28/0 0. 5 5 5 5 10 /28/05	SM 2320B " " SM 2510B 5 13:49 .01 SM 45 SM 2320B " " " SM 2510B 5 13:49 .01 SM 45	11/08/05 " " 11/07/05 500H+ 11/08/05 " " 11/07/05
Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance MERRILL POOL #7 V pH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance BLUE GLACIER #3 V pH Alkalinity as CaCO3		mg/l " umhos/cm (5100894-17) pH Units mg/l " umhos/cm (5100894-18)	115 140 ND ND 1 266 Sampled:10/25 8.32 116 142 ND ND 256 Sampled:10/26 5.85 ND	5/05 16:00 I-03 5/05 10:00	0.01 2 2 2 2 2 Received:10 0.01 2 2 2 2 2 Received:10/ 0.01 2	5 5 5 10 /28/0 0. 5 5 5 5 10 /28/05 0.5	SM 2320B " SM 2510B 5 13:49 .01 SM 45 SM 2320B " " SM 2510B 5 13:49	11/08/05 " " 11/07/05 500H+ 11/07/05 500H+ 11/08/05
Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance MERRILL POOL #7 V pH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance BLUE GLACIER #3 V pH Alkalinity as CaCO3 Bicarbonate		mg/l " umhos/cm (5100894-17) pH Units mg/l " umhos/cm (5100894-18)	115 140 ND ND 1 266 Sampled:10/25 8.32 116 142 ND ND 256 Sampled:10/26 5.85 ND ND	5/05 16:00 I-03 5/05 10:00	0.01 2 2 2 2 2 Received:10 0.01 2 2 2 2 2 Received:10/ 0.01 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 5 5 10 /28/0 5 5 5 10 (28/05 6 5	SM 2320B " " SM 2510B 5 13:49 .01 SM 45 SM 2320B " " " SM 2510B 5 13:49 .01 SM 45	11/08/05 " " 11/07/05 500H+ 11/08/05 " " 11/07/05
Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance MERRILL POOL #7 V pH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance BLUE GLACIER #3 V pH Alkalinity as CaCO3 Bicarbonate Carbonate Carbonate		mg/l " " umhos/cm (5100894-17) pH Units mg/l " " umhos/cm (5100894-18) pH Units mg/l "	115 140 ND ND 266 Sampled:10/25 8.32 116 142 ND ND 256 Sampled:10/26 5.85 ND ND ND	5/05 16:00 I-03 5/05 10:00	0.01 2 2 2 2 2 Received:10 0.01 2 2 2 2 2 Received:10/ 0.01 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 5 5 10 /28/0 0. 5 5 5 10 (28/05 0. 5 5	SM 2320B " " SM 2510B 5 13:49 .01 SM 45 SM 2320B " " " SM 2510B 5 13:49 .01 SM 45	11/08/05 " " 11/07/05 500H+ 11/07/05 500H+ 11/08/05
Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance MERRILL POOL #7 V pH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance BLUE GLACIER #3 V pH Alkalinity as CaCO3 Bicarbonate		mg/l " " umhos/cm (5100894-17) pH Units mg/l " " umhos/cm (5100894-18) pH Units mg/l "	115 140 ND ND 1266 Sampled:10/25 8.32 116 142 ND ND 256 Sampled:10/26 5.85 ND ND ND ND ND ND ND ND	5/05 16:00 I-03 5/05 10:00	0.01 2 2 2 2 2 Received:10 0.01 2 2 2 2 2 Received:10/ 0.01 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 5 5 10 /28/0 5 5 5 10 (28/05 5 5 5	SM 2320B " " SM 2510B 5 13:49 .01	11/08/05 " " 11/07/05 500H+ 11/07/05 500H+ 11/08/05
Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance MERRILL POOL #7 V pH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance BLUE GLACIER #3 V pH Alkalinity as CaCO3 Bicarbonate Carbonate Carbonate Hydroxide	/ater	mg/l " " " " " " " " " " " " " " " " " " "	115 140 ND ND ND 266 Sampled:10/25 8.32 116 142 ND ND 256 Sampled:10/26 5.85 ND	5/05 16:00 I-03 5/05 10:00 I-03	0.01 2 2 2 2 2 Received:10 0.01 2 2 2 2 Received:10/ 0.01 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 5 5 10 /28/0 5 5 5 10 (28/05 5 5 5	SM 2320B " " " " SM 2510B 5 13:49 .01 SM 45 SM 2320B " " " SM 2510B 5 13:49 .01 SM 45 SM 2320B " " " " " " SM 2510B 5 13:49 .01 SM 45 .01 SM 25 .00 SM 2320B	11/08/05 " " 11/07/05 500H+ 11/08/05 " " 11/07/05
Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance MERRILL POOL #7 V pH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance BLUE GLACIER #3 V pH Alkalinity as CaCO3 Bicarbonate Carbonate Carbonate Carbonate Carbonate Hydroxide Specific Conductance	/ater	mg/l " " " " " " " " " " " " " " " " " " "	115 140 ND ND ND 266 Sampled:10/25 8.32 116 142 ND ND 256 Sampled:10/26 5.85 ND	5/05 16:00 I-03 5/05 10:00 I-03	0.01 2 2 2 2 2 Received:10 0.01 2 2 2 2 Received:10/ 0.01 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 5 5 10 /28/0 0. 5 5 5 10 /28/05 5 5 10	SM 2320B "" SM 2510B 5 13:49 .01 SM 45 SM 2320B "" SM 2510B 5 13:49 .01 SM 45 SM 2320B "" .01 SM 45 SM 2320B	11/08/05 " " 11/07/05 500H+ 11/08/05 " " 11/07/05
Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance MERRILL POOL #7 PH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance BLUE GLACIER #3 PH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance BLUE GLACIER #4 WELL BLUE GLACIER #4 WELL BLUE GLACIER #4	/ater	mg/l " " umhos/cm (5100894-17) pH Units mg/l " " umhos/cm (5100894-18) pH Units mg/l " " umhos/cm (5100894-19)	115 140 ND ND ND 266 Sampled:10/25 8.32 116 142 ND ND 256 Sampled:10/26 5.85 ND	5/05 16:00 I-03 5/05 10:00 I-03	0.01 2 2 2 2 2 Received:10 0.01 2 2 2 2 Received:10/ 0.01 2 2 2 2 Received:10/	5 5 5 10 /28/0 0. 5 5 5 10 /28/05 5 5 5 0.	SM 2320B " " " SM 2510B 5 13:49 .01 SM 45 SM 2320B " " SM 2510B 5 13:49 .01 SM 45 SM 2320B " " 10 SM 25 5 13:49 .01 SM 45 SM 2320B	11/08/05 " " 11/07/05 500H+ 11/08/05 " " 11/07/05 500H+ 11/08/05 " " 510B
Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance MERRILL POOL #7 PH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance BLUE GLACIER #3 PH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance BLUE GLACIER #4 PH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance BLUE GLACIER #4 PH Alkalinity as CaCO3 Bicarbonate	/ater	mg/l " " " " " " " " " " " " " " " " " " "	115 140 ND ND ND 266 Sampled:10/25 8.32 116 142 ND ND 256 Sampled:10/26 5.85 ND ND ND ND ND Sampled:10/26 5.60 3 4	5/05 16:00 I-03 5/05 10:00 I-03	0.01 2 2 2 2 2 Received:10 0.01 2 2 2 2 Received:10/ 0.01 2 2 2 Received:10/ 0.01 2 2 2 2 2 Received:10/	5 5 5 10 /28/0 0. 5 5 5 10 /28/05 5 5 7 2 28/05	SM 2320B " " " SM 2510B 5 13:49 .01 SM 45 SM 2320B " " SM 2510B 5 13:49 .01 SM 45 SM 2320B " " 10 SM 25 5 13:49 .01 SM 45 SM 2320B	11/08/05 " " 11/07/05 500H+ 11/08/05 " " 11/07/05 500H+ 11/08/05 " " 510B
Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance MERRILL POOL #7 PH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance BLUE GLACIER #3 PH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance BLUE GLACIER #4 PH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance BLUE GLACIER #4 PH Alkalinity as CaCO3 Bicarbonate Carbonate Carbonate Carbonate Carbonate	/ater	mg/l " " " " " " " " " " " " " " " " " " "	115 140 ND ND ND 266 Sampled:10/25 8.32 116 142 ND ND 256 Sampled:10/26 5.85 ND ND ND ND ND Sampled:10/26 5.60 3 4 ND	5/05 16:00 I-03 5/05 10:00 I-03 J	0.01 2 2 2 2 2 Received:10 0.01 2 2 2 2 Received:10/ 0.01 2 2 2 Received:10/ 0.01 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 5 5 10 /28/0 0. 5 5 5 10 /28/05 0. 5 5 5 0.	SM 2320B "" SM 2510B 5 13:49 .01 SM 45 SM 2320B "" SM 2510B 5 13:49 .01 SM 45 SM 2320B "" 10 SM 25 5 13:49 .01 SM 45 SM 2320B	11/08/05 " " 11/07/05 500H+ 11/08/05 " " 11/07/05 500H+ 11/08/05 " " 5510B
Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance MERRILL POOL #7 PH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance BLUE GLACIER #3 PH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance BLUE GLACIER #4 PH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance BLUE GLACIER #4 PH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Carbonate Carbonate Carbonate Carbonate	/ater	mg/l " " " " " " " " " " " " " " " " " " "	115 140 ND ND ND 266 Sampled:10/25 8.32 116 142 ND ND 256 Sampled:10/26 5.85 ND ND ND ND ND Sampled:10/26 5.60 3 4 ND	5/05 16:00 I-03 5/05 10:00 I-03 J	0.01 2 2 2 2 2 Received:10 0.01 2 2 2 2 Received:10/ 0.01 2 2 2 Received:10/ 0.01 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 5 5 10 /28/0 0. 5 5 5 10 /28/05 0. 5 5 5 0. 5 5 5 0. 5 5 5 0. 5 5 5 0. 6 0. 6	SM 2320B "" SM 2510B 5 13:49 .01 SM 45 SM 2320B "" SM 2510B 5 13:49 .01 SM 45 SM 2320B "" 10 SM 25 5 13:49 .01 SM 45 5 SM 25 5 SM 25	11/08/05 " " 11/07/05 500H+ 11/08/05 " " 11/07/05 500H+ 11/08/05 " " 510B 500H+ 320B
Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance MERRILL POOL #7 PH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance BLUE GLACIER #3 PH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance BLUE GLACIER #4 PH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance BLUE GLACIER #4 PH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance BLUE GLACIER #4 PH Alkalinity as CaCO3 Bicarbonate Carbonate Carbonate Hydroxide Specific Conductance	/ater	mg/l " " " " " " " " " " " " " " " " " " "	115 140 ND ND ND 266 Sampled:10/25 8.32 116 142 ND ND 256 Sampled:10/26 5.85 ND ND ND ND ND Sampled:10/26 5.60 3 4 ND	5/05 16:00 I-03 5/05 10:00 I-03 J J	0.01 2 2 2 2 2 2 Received:10 0.01 2 2 2 2 Received:10 0.01 2 2 2 Received:10/ 0.01 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 5 5 10 /28/0 0. 5 5 5 10 /28/05 5 5 5 7 2 8/05 0. 5 5 5 5 5 7 0. 5 5 5 7 0. 6 7 10 10 10 10 10 10 10 10 10 10 10 10 10	SM 2320B "" SM 2510B 5 13:49 .01 SM 45 SM 2510B 5 13:49 .01 SM 45 SM 2320B "" 10 SM 25 5 13:49 .01 SM 45 SM 2320B "" SM 2510B	11/08/05 " " 11/07/05 500H+ 11/08/05 " " 11/07/05 500H+ 11/08/05 " " 5510B
Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance MERRILL POOL #7 PH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance BLUE GLACIER #3 PH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance BLUE GLACIER #4 PH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Specific Conductance BLUE GLACIER #4 PH Alkalinity as CaCO3 Bicarbonate Carbonate Hydroxide Carbonate Carbonate Carbonate Carbonate	/ater	mg/l " " " " " " " " " " " " " " " " " " "	115 140 ND ND ND 266 Sampled:10/25 8.32 116 142 ND ND 256 Sampled:10/26 5.85 ND ND ND ND ND Sampled:10/26 5.60 3 4 ND	5/05 16:00 I-03 5/05 10:00 I-03 J J	0.01 2 2 2 2 2 2 Received:10 0.01 2 2 2 2 Received:10 0.01 2 2 2 Received:10/ 0.01 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 5 5 10 /28/0 0. 5 5 5 10 28/05 5 5 5 0. 28/05 6 8/05	SM 2320B " " " SM 2510B 5 13:49 .01 SM 45 SM 2320B " " " SM 2510B 5 13:49 .01 SM 45 5 SM 2320B " " " " " " " SM 2510B 13:49 .01 SM 45 5 SM 25 13:49 .01 SM 45 5 SM 25 13:49	11/08/05 " " 11/07/05 500H+ 11/08/05 " " 11/07/05 500H+ 11/08/05 " " 510B 500H+ 320B

Alkalinity as CaCO3			mg/l	3		2	5	SM 2320B	11/08/05
Bicarbonate				4		2	5	"	"
Carbonate				ND		2	5	п	II .
Hydroxide				ND		2	5		
•								0 (M.)	E10D
Specific Conductance			umhos/cm	3	J	2	1		210B
UPPER LEVEL #2 Wa	ater (5	100894-	·21) Sar	mpled:10/26/0	05 11:00 Re	ceived:10/2	8/05	13:49	
pН			pH Units	6.03	1-03	0.01	0.0	01 SM 45	600H+
Alkalinity as CaCO3			mg/l	4	J	2	5		320B
Bicarbonate			"	5	-	2	5		"
Carbonate				ND		2	5		
Hydroxide				ND		2	5		
Specific Conductance			umhos/cm	5	J	2	1	0 SM 2	510B
CRYSTAL RED ROOM	Water	(51008	394-22)	Sampled:10/2	26/05 12:00	Received:1	0/28/	05 13:49	
рH			pH Units	6.98	1-03	0.01	0.0	01 SM 45	600H+
Alkalinity as CaCO3			mg/l	9		2	5	SM 2320B	11/08/05
Bicarbonate			"	11		2	5	"	"
				• • • • • • • • • • • • • • • • • • • •		2	3		
General Chemist	ry								
Analyto			Units	Results	Qualifier	MDL	RL	Method	Analyzed
Analyte			Ullits	Results	Qualifier	IVIDL	KL	wethou	Analyzeu
CRYSTAL RED ROOM	Water	(51008	394-22)	Sampled:10/2	26/05 12:00	Received:1	0/28/	05 13:49	
Carbonate				ND		2	5		"
Hydroxide				ND		2	5		
Specific Conductance			umhos/cm	38		2	10	SM 2510B	11/03/05
	Motor				04 /0E 12.00				11700700
CRYSTAL RED ROOM	water	(51008	394-23)	Sampled:10/2	26/05 12:00	Received:1	0/28/	05 13:49	
pН			pH Units	7.05	I-03	0.01	0.0	01 SM 45	600H+
Alkalinity as CaCO3			mg/l	40		2	5	SM 2320B	11/08/05
Bicarbonate			"	49		2	5	"	"
Carbonate			ш	ND		2	5	"	"
Hydroxide				ND		2	5	· ·	· ·
Specific Conductance			umhos/cm	50		2	10	SM 2510B	11/03/05
-	/E1000			d:10/26/05 11	.20 Bossiya	d:10/28/05			11,00,00
INCLINE #1 Water	(51008	74-24)	Sample	u.10/20/05 11		u. 10/26/03	13.43	,	
pН			pH Units	6.55	I-03	0.01	0.0	01 SM 45	600H+
Alkalinity as CaCO3			mg/l	14		2	5	SM 2320B	11/08/05
Bicarbonate			"	16		2	5	II .	· ·
Carbonate			"	ND		2	5	"	"
Hydroxide				ND		2	5	II .	· ·
Specific Conductance			umhos/cm	5	J	2	1	0 SM 2	510B
INCLINE #2 Water	(51008	94-25)	Sample	d:10/26/05 11	·30 Receive	d:10/28/05	13.49	•	
	(0.000	, . <u>_</u> ,	-						
pН			pH Units	7.78	I-03	0.01	0.0		
Alkalinity as CaCO3			mg/l	57		2	5	SM 2320B	11/08/05
Bicarbonate			"	70		2	5	"	"
Carbonate			"	ND		2	5	"	"
Hydroxide			"	ND		2	5	"	"
Specific Conductance			umhos/cm	74		2	10	SM 2510B	11/03/05
INCLINE #3 Water	(51008	94-26)	Sample	d:10/26/05 11	:30 Receive	d:10/28/05	13:49)	
nU	•	,	-	7.88	1-03	0.01	0.0		OOU .
pH			pH Units		1-03				
Alkalinity as CaCO3			mg/l "	61		2	5	SM 2320B	11/08/05
Bicarbonate				74		2	5		
Carbonate				ND		2	5		"
Hydroxide			"	ND		2	5	"	"
Specific Conductance			umhos/cm	80		2	10	SM 2510B	11/03/05
BIG PAINTED #1 Wa	ater (5	100894-	-27) Saı	mpled:10/26/0	05 15:00 Re	ceived:10/2	8/05	13:49	
pH			pH Units	7.65	1-03	0.01	0.0	01 SM 45	i00H+
•			•	30	1 03	2	5	SM 2320B	11/08/05
Alkalinity as CaCO3			mg/l "			2		SIVI 2320B	11/08/05
Bicarbonate				37			5		
Carbonate				ND		2	5		
Hydroxide			•	ND		2	5	••	

Specific Conductance

umhos/cm

110

10

2

SM 2510B

11/03/05

BIG PAINTED #2 Water (5100894-28) Sa	mpled:10/26/0	05 15:00 Re	eceived:10/2	8/05 13	3:49	
pН	pH Units	7.66	1-03	0.01	0.01	SM 45	600H+
Alkalinity as CaCO3	mg/l	30		2	5	SM 2320B	11/08/05
Bicarbonate	"	37		2	5	"	"
Carbonate	· ·	ND		2	5	"	"
Hydroxide	"	ND		2	5	"	"
Specific Conductance	umhos/cm	107		2	10	SM 2510B	11/03/05
BIG PAINTED #3 Water (5100894-29) Sa	mpled:10/26/0)5 15:00 Re	eceived:10/2	8/05 13	3:49	
pH	pH Units	7.67	1-03	0.01	0.01	SM 45	600H+
Alkalinity as CaCO3	mg/l	30		2	5	SM 2320B	11/08/05
Bicarbonate	"	37		2	5	"	"
Carbonate	"	ND		2	5	"	"
General Chemistry							
Analyte	Units	Results	Qualifier	MDL	RL	Method	Analyzed
BIG PAINTED #3 Water (5100894-29) Sa	mpled:10/26/0	05 15:00 Re			3:49	
Hydroxide	"	ND		2	5	"	"
Specific Conductance	umhos/cm	115		2	10	SM 2510B	11/03/05
SKULL #1-3 Water (5100)	894-30) Sample	d:10/26/05 16	:00 Receive	ed:10/28/05	13:49		
pH	pH Units	7.39	I-03	0.01	0.01	SM 45	600H+
Alkalinity as CaCO3	mg/l	26		2	5	SM 2320B	11/08/05
Bicarbonate	"	32		2	5	"	"
Carbonate	"	ND		2	5	"	"
Hydroxide		ND		2	5		
Specific Conductance	umhos/cm	74	0 - Danistania	2	10	SM 2510B	11/03/05
SKULL #4 Water (510089	4-31) Sampled:	10/26/05 16:0		:10/28/05 1			
pH	pH Units	7.40	1-03	0.01	0.01		600H+
Alkalinity as CaCO3	mg/l "	22		2	5	SM 2320B	11/08/05
Bicarbonate		26 ND		2	5	"	
Carbonate Hydroxide		ND ND		2 2	5 5	"	
Specific Conductance	umhos/cm	71		2	10	SM 2510B	11/03/05
SKULL #5 Water (510089		10/26/05 16:0	n Peceived	:10/28/05 1		5W 20 10B	11700700
·	•					C14.41	.0011
pH	pH Units	7.47 25	I-03	0.01 2	0.01 5	SM 2320B	11/00/05
Alkalinity as CaCO3 Bicarbonate	mg/l "	25 30		2	5 5	SIVI 2320B	11/08/05
Carbonate		ND		2	5	"	
Hydroxide	п	ND		2	5		
Specific Conductance	umhos/cm	75		2	10	SM 2510B	11/03/05
DUFFYS WELL W #1 Water	(5100894-33)	Sampled:10/2	7/05 15:30	Received:10	0/28/05	13:49	
pH	pH Units	8.31	I-03	0.01	0.01		500H+
Alkalinity as CaCO3	mg/l	180	. 00	2	5	SM 2320B	11/08/05
Bicarbonate		220		2	5	"	
Carbonate	п	ND		2	5	···	
Hydroxide	· ·	ND		2	5	II .	"
Specific Conductance	umhos/cm	589		2	10	SM 2510B	11/07/05
DUFFYS WELL W #2 Water	(5100894-34)	Sampled:10/2	7/05 15:30	Received:10	0/28/05	13:49	
pH	pH Units	7.45	1-03	0.01	0.01	SM 45	600H+
Alkalinity as CaCO3	mg/l	25		2	5	SM 2320B	11/08/05
Bicarbonate	"	30		2	5	"	"
Carbonate	· ·	ND		2	5	II.	"
Hydroxide		ND		2	5	"	"
Specific Conductance	umhos/cm	213		2	10	SM 2510B	11/07/05
DUFFYS WELL W #3 Water	(5100894-35)	Sampled: 10/2	7/05 15:30	Received:10	0/28/05	13:49	
pH	pH Units	7.47	1-03	0.01	0.01	SM	
Alkalinity as CaCO3	mg/l	25		2	5	SM 2320B	11/08/05
Bicarbonate		31		2	5		"
Carbonate	"	ND		2	5	"	"
Hydroxide		ND		2	5	=	

Specific Conductance	umhos/cm	114		2	10	SM 2510B	11/07/05
DUFFYS WELL ICE #1 Wa	er (5100894-36)	Sampled:10/	/27/05 15:30	Received:	10/28	/05 13:49	
pН	pH Units	6.11	1-03	0.01	0.0)1 SM 45	500H+
Alkalinity as CaCO3	mg/l	9		2	5	SM 2320B	11/08/05
Bicarbonate	п	8		2	5	"	"
Carbonate	ıı .	ND		2	5	"	"
Hydroxide	п	ND		2	5	"	"
General Chemistry							
Analyte	Units	Results	Qualifier	MDL	RL	Method	Analyzed
•							-
DUFFYS WELL ICE #1 Wa	er (5100894-36)	Sampled:10/	/27/05 15:30	Received:	10/28	/05 13:49	-
•	er (5100894-36) umhos/cm	Sampled:10/	/27/05 15:30	Received:	10/28 ,	/05 13:49 SM 2510B	11/07/05
DUFFYS WELL ICE #1 Wa	umhos/cm	10	/27/05 15:30 /27/05 15:30		10	SM 2510B	11/07/05
DUFFYS WELL ICE #1 Wa Specific Conductance	umhos/cm	10		2	10	SM 2510B /05 13:49	11/07/05 500H+
DUFFYS WELL ICE #1 Wa Specific Conductance DUFFYS WELL ICE #2 Wa	umhos/cm er (5100894-37)	10 Sampled:10	/27/05 15:30	2 Received:	10 10/28	SM 2510B /05 13:49 01 SM 45	
DUFFYS WELL ICE #1 Wa Specific Conductance DUFFYS WELL ICE #2 Wa pH	umhos/cm er (5100894-37) pH Units	10 Sampled:10/ 6.07	/27/05 15:30	2 Received: 0.01	10 10/28, 0.0	SM 2510B /05 13:49 01 SM 45 SM 2	500H+
DUFFYS WELL ICE #1 Wa Specific Conductance DUFFYS WELL ICE #2 Wa pH Alkalinity as CaCO3	umhos/cm er (5100894-37) pH Units mg/l	10 Sampled:107 6.07 2	/27/05 15:30	2 Received: 0.01	10 10/28, 0.0 5	SM 2510B /05 13:49 01 SM 45 SM 2	500H+
DUFFYS WELL ICE #1 Wa Specific Conductance DUFFYS WELL ICE #2 Wa pH Alkalinity as CaCO3 Bicarbonate	umhos/cm er (5100894-37) pH Units mg/l	10 Sampled:10/ 6.07 2 2	/27/05 15:30	2 Received: 0.01 2 2	10 10/28, 0.0 5 5	SM 2510B /05 13:49 01 SM 45 SM 2	500H+ 320B

Analyte		Result	RL	Units	Level	Result	%REC	Limits	RPD
			Gen	eral Che	emistry	/			
Batch B5J0604 - G	eneral Prep - GC								
LCS	•								
pH		6.99		pH Units	7.00		99.9	80-120	
Duplicate	Source: 5100894-01								
pH		7.87	0.01	pH Units		7.86			0.127
Duplicate	Source: 5100894-11								
pН		7.63	0.01	pH Units		7.67			0.523
Batch B5J0605 - G	eneral Prep - GC								
LCS									
pН		7.01		pH Units	7.00		100	80-120	
Duplicate	Source: 5100894-21								
рН		6.02	0.01	pH Units		6.03			0.166
Batch B5K0019 - 0	General Prep - GC								
LCS									
рН		7.00		pH Units	7.00		100	80-120	
Duplicate	Source: 5100894-31								
рН		7.39	0.01	pH Units		7.40			0.135
Batch B5K0020 - G	General Prep - GC								
Blank									
Alkalinity as CaCO3		ND	5	mg/l					
Bicarbonate Carbonate		ND ND	5 5	mg/l mg/l					
Hydroxide		ND	5	mg/l					
LCS				-					
Alkalinity as CaCO3		0.05		mg/l	0.050		100	80-120	
Duplicate	Source: 5100894-05				^				
Alkalinity as CaCO3		ND	5	mg/l		ND			
Duplicate	Source: 5100894-15								
Alkalinity as CaCO3		115	5	mg/l		114			0.873
Batch B5K0021 - G	General Prep - GC								
Blank									
Alkalinity as CaCO3		ND	5	mg/l					
Bicarbonate		ND ND	5 5	mg/l					
Carbonate Hydroxide		ND ND	5	mg/l mg/l					
LCS				J					
Alkalinity as CaCO3		0.05		mg/l	0.050		100	80-120	
Duplicate	Source: 5100894-22				^				
Alkalinity as CaCO3		10.0	5	mg/l		9			10.5
			Quali	ty Cont	rol Da	ıta			
			5 .		-	Source		%REC	
Analyte		Result	RL	Units	Level	Result	%REC	Limits	RPD
			Gen	eral Che	emistry	/			

Duplicate	Source: 5100894-31	22.0	F			22			0.00
Alkalinity as CaCO3		22.0	5	mg/l		22			0.00
Batch B5K0065 - G	eneral Prep - GC								
Blank									
Specific Conductance		ND	10	umhos/cm					
LCS		00.0			100		00.0	00 100	
Specific Conductance		99.0		umhos/cm	100		99.0	80-120	
Duplicate Specific Conductance	Source: 5100894-05	15.0	10	umhos/cm		15			0.00
•	Source: 5100894-21	13.0	10	ummos/cm		13			0.00
Duplicate Specific Conductance	Source: 5100894-21	5.00	10	umhos/cm		5			0.00
		5.00	10	ummos/cm		3			0.00
Batch B5K0066 - G	eneral Prep - GC								
Blank									
Specific Conductance		ND	10	umhos/cm					
LCS		00.0			100		00.0	00 100	
Specific Conductance	5400004.04	98.0		umhos/cm	100		98.0	80-120	
Duplicate Specific Conductance	Source: 5100894-31	71.0	10	umhos/cm		71			0.00
·		71.0	10	ummos/cm		<i>,</i> ,			0.00
Batch B5K0149 - G	eneral Prep - GC								
Blank									
Specific Conductance		ND	10	umhos/cm					
LCS			10		100		101	00.100	
LCS Specific Conductance	Cause 5440052 04	ND 101	10	umnos/cm	100		101	80-120	
LCS Specific Conductance Duplicate	Source: 5110253-01	101		umhos/cm	100	262	101	80-120	1 14
LCS Specific Conductance Duplicate Specific Conductance			10		100	262	101	80-120	1.14
LCS Specific Conductance Duplicate Specific Conductance Duplicate	Source: 5110253-01 Source: 5110285-01	101		umhos/cm	100	262	101	80-120	1.14
LCS Specific Conductance Duplicate Specific Conductance Duplicate Specific Conductance	Source: 5110285-01	101 265	10	umhos/cm umhos/cm	100		101	80-120	
Specific Conductance Duplicate Specific Conductance Duplicate Specific Conductance Batch B5K0151 - G	Source: 5110285-01	101 265	10	umhos/cm umhos/cm	100		101	80-120	
Specific Conductance Duplicate Specific Conductance Duplicate Specific Conductance Batch B5K0151 - G Blank	Source: 5110285-01	101 265 6.00	10 10	umhos/cm umhos/cm	100		101	80-120	
Specific Conductance Duplicate Specific Conductance Duplicate Specific Conductance Batch B5K0151 - G Blank Specific Conductance	Source: 5110285-01	101 265	10	umhos/cm umhos/cm	100		101	80-120	
Specific Conductance Duplicate Specific Conductance Duplicate Specific Conductance Batch B5K0151 - G Blank	Source: 5110285-01	101 265 6.00	10 10	umhos/cm umhos/cm	100		101	80-120 80-120	
Specific Conductance Duplicate Specific Conductance Duplicate Specific Conductance Batch B5K0151 - G Blank Specific Conductance LCS Specific Conductance	Source: 5110285-01	101 265 6.00 ND	10 10	umhos/cm umhos/cm umhos/cm					
Specific Conductance Duplicate Specific Conductance Duplicate Specific Conductance Batch B5K0151 - G Blank Specific Conductance LCS	Source: 5110285-01 eneral Prep - GC	101 265 6.00 ND	10 10	umhos/cm umhos/cm umhos/cm					
Specific Conductance Duplicate Specific Conductance Duplicate Specific Conductance Batch B5K0151 - G Blank Specific Conductance LCS Specific Conductance Duplicate	Source: 5110285-01 eneral Prep - GC	101 265 6.00 ND 107	10 10 10	umhos/cm umhos/cm umhos/cm umhos/cm		6			0.00

Basic Laboratory, Inc.

California D.O.H.S. Cert #1677

Page 1 of 10

5100894

eported: 11/16/05

(707) 825-5189

Prepared	Batch
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10/31/05	10/31/05	B5J0604
10/31/05	B5K0020	
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11/08/05	B5K0020	
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11/03/05	B5K0065	
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Prepared Batch

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 B5K0019

 11/08/05
 11/08/05
 B5K0021

" " " 11/03/05 B5K0066

Limit

Qualifier

RPD

Limit Qualifier

20 J

20 J

Site	Date	Temp ©	Specific Conductance	DO	рН
Lassen Volcanic National Park (LAVO)					
Manzanita Creek	6/6/2005	5.24 5.23 5.22	61	11.33	8.69 8.65 8.72
Manzanita Lake	6/6/2005	12.31 12.53 12.59	72	11.29	9.41
Hat Creek	6/6/2005	5.24 5.14 5.11	37	11.11	8.25 8.2 8.18
Snag Lake	6/7/2005	14.18 13.95 14.09	32	8.89	
Butte Lake	6/7/2005	13.46 13.68 13.7	48	9.44	8.91
Kings Creek	6/8/2005	1.84 1.85 1.85	26	11.33	7.56
Mill Creek	6/8/2005	3.01 3.03 3.04	71	11.43	7.76
Little Willow Lake	6/8/2005	6.45 6.61 6.73	g	7.39	6.64 6.63 6.67
Hot Springs Creek	6/8/2005	10.16 10.15 10.14	81	9.73	8.5
Summit Lake	6/9/2005	2.65 2.8 2.41	10	9.31	
Jakey Lake	7/25/2005	22.44 22.46 22.47	13	7.67	

Horseshoe Lake	7/26/2005	20.81 21.02 21.01	31 31 31	7.27 7.26 7.25	8.2 8.22 8.23
Crystal Lake	7/26/2005	21.82 21.75 21.85	7 7 7	7.11 7.12 7.12	7.41 7.38 7.36
Juniper Lake	7/26/2005	18.67 18.64 18.79	10 10 10	7.78 7.8 7.8	7.5 7.53 7.51
Ridge Lake	7/26/2005	13.32 13.38 13.53	94 94 94	9 9.01 9.06	6.05 6.06 6.09
Emerald Lake	7/27/2005	13.09 13.1 13.03	9 9 9	8.17 8.16 8.17	7.07 7.05 7.01
Lake Helen	7/27/2005	6.05 5.97 6.06	2 2 2	10.24 10.26 10.13	6.33 6.27 6.33
Terrace Lake	7/27/2005	16.57 16.96 17.02	1 1 1	7.69 7.66 7.51	6.11 6.08 6.18
Shadow Lake	7/27/2005	16.42 16.5 16.52	2 2 2	7.92 7.9 7.88	6.51 6.53 6.55
Cliff Lake	7/27/2005	15.03 14.83 15.39	71 72 72	9.85 10.29 10.43	8.64 8.66 8.67
Crumbaugh Lake	7/27/2005	18.37 18.43 18.46	34 33 33	7.62 7.58 7.54	6.8 6.79 6.77
Sifford Lake #1 Main Body	7/28/2005	21.4 21.49 21.51	2 2 2	6.13 6.13 6.19	6.3 6.3 6.26
Sifford Lake #2	7/28/2005	20.84 20.92 20.95	2 2 2	6.1 6.2 6.19	6.35 6.35 6.34

Kings Creek	8/23/2005	11.84 11.85 11.84	33 33 33	9.66	8.36 8.34 8.35
Summit Lake	8/23/2005	21.51 21.61 21.63	25 25 25	7.65 7.66 7.63	8.3 8.27 8.28
Hat Creek	8/23/2005	11.97 12 11.96	96 96 96	9.59 9.5 9.53	8.74 8.73 8.7
Manzanita Creek	8/23/2005	9.81 9.8 9.79	67 69 94	9.77 9.76 9.8	8.61 8.58 8.56
Manzanita Lake	8/23/2005	17.96 18.25 18.92	80 81 82	na	9.94 9.95 9.94
Lake Helen	8/23/2005	14.15 14.15 14.09	2 2 2	7.34 7.33 7.38	7.63 7.5 7.39
Emerald Lake	8/23/2005	17.22 17.17 17.11	8 8 8	7.2 7.31 7.29	7.46 7.39 7.38
Mill Creek	8/23/2005	6.82 6.85 6.87	39 39 38	9.77 9.72 9.61	7.98 7.96 8.01
Silver Lake	8/29/2005	20.1 20.06 20.11	4 4 4	7.35 7.44 7.68	7.78 7.74 7.68
Feather Lake	8/29/2005	20.51 20.5 20.48	2 2 2	7.13	7.25 7.2 7.19
Rainbow Lake	8/30/2005	19.1 18.95 18.36	9 9 9	6.9 6.95 7.02	7.82 7.82 7.83
Lower Twin Lake	8/30/2005	18.43 18.62 18.67	5 5 5	7.01 7.01 6.99	7.67 7.66 7.64
Upper Twin Lake	8/30/2005	19.62 19.61	3 3		7.23 7.27

		19.62	3	7.13	7.25
Terrace Lake	8/31/2005	15.31	1	7.28	6.55
	0,0 1, =000	15.21	1	7.31	6.52
		15.31	1	7.34	6.5
Crumbaugh Lake	8/31/2005	16.41	33	6.72	7.25
		16.45	32	6.65	7.24
		16.51	33	6.7	7.24
Butte Lake	8/31/2005	17.8	46	8.46	9.41
		17.69	46	8.48	9.42
		17.87	46	8.44	9.43
Snag Lake	9/1/2005	15.52	34	7.81	8.9
		15.7	33	7.88	9.06
		15.76	33	7.95	9.15
Horseshoe Lake	9/1/2005	17.6	29	7.77	8.6
		17.57	29	7.81	8.61
		17.52	29	7.81	8.59
Crystal Lake	9/1/2005	18.56	7	6.77	7.63
		18.29	7	6.76	7.61
		18.51	7	6.75	7.6
Juniper Lake	9/1/2005	17.4	8	7.91	7.78
		17.44	8	7.9	7.79
		17.53	8	7.85	7.79

Coordinate	fecal sample collected	water sample collected	Nitrate/CI sample collected
10T 0622064	na	yes	na
UTM 4488004	na	yes	na
	na	yes	na
10T 0621221	na	yes	na
UTM 4488081	na	yes	na
	na	yes	na
		•	
10T 06030103	na	yes	na
UTM 4485270	na	yes	na
	na	yes	na
10T 0630104	yes	yes	na
UTM 4485272		yes	na
	yes	yes	na
10T 0630104	yes	yes	na
UTM 4485272	•	yes	na
10T 0644044 UTM 4491642	yes	yes	na
011W1 4431042			
10T 0630665	na	yes	na
UTM 4479830	na	yes	na
	na	yes	na
10T 0624345	na	yes	na
UTM 4479830	na	yes	na
	na	yes	na
10T 0636730	na	yes	na
UTM 4474385	na	yes	na
	na	yes	na
10T 0638789	na	yes	na
UTM 4477127	na	yes	na
	na	yes	na
40T 0022042			
10T 0633643	yes	yes	na
UTM 4483576		yes	na
	yes	yes	na
na	na	yes	na
na	na	yes	na
na	na	yes	na
· 		<i>y</i> - -	

10T 0641421	yes	yes	na
UTM 4481151	yes	yes	na
	yes	yes	na
	,	,	
10T 0644964	yes	yes	na
UTM 4479999		yes	na
3 1 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	yes	yes	na
	y00	y03	iiu
10T 0644490	yes	yes	na
UTM 4478960	-	yes	na
3 1 11 1 1 1 2 2 2 2	yes	yes	na
	y00	y03	iid
na	na	yes	na
na	na	yes	na
na	na	yes	na
Πα	TIQ .	yes	Πά
10T 0625717	yes	yes	na
UTM 4480498	yes	yes	na
0 1 W 1 100 100	yes	yes	na
	yes	yes	Πά
10T 0626482	yes	yes	na
UTM 4480465	yes	yes	na
0 m 1100 100	yes	yes	na
	y00	y03	iid
10T 0629486	yes	yes	na
UTM 4481854		yes	na
	yes	yes	na
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na	na	yes	na
na	na	yes	na
na	na	yes	na
Πα		,00	110
na	na	yes	na
na	na	yes	na
na	na	yes	na
		,00	
10T 0628223	yes	yes	na
UTM 4481854		yes	na
	yes	yes	na
	,00	,00	114
na	na	yes	na
na	na	yes	na
na	na	yes	na
		,	
na	na	yes	na
na	na	yes	na
na		-	na
IIa	na	yes	πα

10T 0630636 UTM 4479829	na na na	yes yes yes	na na na
10T 0633637 UTM 4483572	yes yes yes	yes yes yes	na na na
10T 0630104 UTM 4485285	na na na	yes yes yes	na na na
10T 0622073 UTM 4487971	na na na	yes yes yes	na na na
10T 0621244 UTM 4488075	yes yes yes	yes yes yes	na na na
10T 0626482 UTM 4480465	yes yes yes	yes yes yes	na na na
10T 0625717 UTM 4480498	yes yes yes	yes yes yes	na na na
10T 0624344 UTM 4476527	na na na	yes yes yes	na na na
10T 0636914 UTM 4487432	na na na	yes yes yes	na na na
10T 0637268 UTM 4487263	na na na	yes yes yes	na na na
10T 0639729 UTM 4485641	na na na	yes yes yes	na na na
10T 0638925 UTM 4485210	yes yes	yes yes	na na na
10T 0638196 UTM 4484780	yes yes	yes yes	na na

	yes	yes	na
10T 0629486	yes	yes	na
UTM 4481854	yes	yes	na
	yes	yes	na
10T 0628223	yes	yes	na
UTM 4481854	yes	yes	na
	yes	yes	na
10T 0643930	yes	yes	na
UTM 4491660	yes	yes	na
	yes	yes	na
10T0643192	yes	yes	na
UTM 4484880	yes	yes	na
	yes	yes	na
10T 0641421	yes	yes	na
UTM 4481151	yes	yes	na
	yes	yes	na
40T 0044004			
10T 0644964	yes	yes	na
UTM 4479999	yes	yes	na
	yes	yes	na
10T 0644490	VAS	VAS	na
UTM 4478960	yes yes	yes yes	na
O 1 W 447 0300	•	· •	na
	yes	yes	ııa

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521

Attention: CHRIS CURRENS

Project: NPS - BASELINE WATER QUALITY INVENTORY

Analyte	Units	Results Qualifie	r MDL	RL	Method
KINGS CREEK 1 Surface Water	(5081018-01)	Sampled:08/23/05 15:00	Received:08/24/05	13:22	
рH	pH Units	7.83	0.01	0.01	SM 4500H+
Alkalinity as CaCO3	mg/l	18	2	5	SM 2320B
Hydroxide	ıı .	ND	2	5	"
Bicarbonate	"	22	2	5	"
Carbonate		ND	2	5	"
Specific Conductance	umhos/cm	40	2	10	SM 2510B
KINGS CREEK 2 Surface Water	(5081018-02)	Sampled:08/23/05 15:00	Received:08/24/05		
Alkalinity as CaCO3	mg/l	18	2	5	SM 2320B
Hydroxide	"	ND	2	5	"
Bicarbonate Carbonate	"	22 S	2 2	5 5	
KINGS CREEK 3 Surface Water	(5081018-03)	Sampled:08/23/05 15:00			
Alkalinity as CaCO3	mg/l	19	2	5	SM 2320B
Hydroxide	"	ND	2	5	"
Bicarbonate	п	23	2	5	п
Carbonate	"	ND	2	5	"
SUMMIT LAKE 1 Surface Wate	r (5081018-04)	Sampled:08/23/05 15:30	Received:08/24/0!	5 13:22	
pH	pH Units	7.98	0.01	0.01	SM 4500H+
Alkalinity as CaCO3	mg/l	14	2	5	SM 2320B
Hydroxide	"	ND	2	5	"
Bicarbonate		17 ND	2	5 5	
Carbonate Specific Conductance	umhos/cm	ND 25	2 2	ວ 10	SM 2510B
SUMMIT LAKE 2 Surface Wate					3W 23 10B
Alkalinity as CaCO3	mg/l	15	2	5	SM 2320B
Hydroxide	"	ND	2	5	3W 2320D
Bicarbonate	"	18	2	5	"
Carbonate	п	ND	2	5	п
SUMMIT LAKE 3 Surface Wate	r (5081018-06)	Sampled:08/23/05 15:30	Received:08/24/09	5 13:22	
Alkalinity as CaCO3	mg/l	15	2	5	SM 2320B
Hydroxide	II .	ND	2	5	u u
Bicarbonate	"	18	2	5	"
Carbonate	" (=001010.0 =)	ND	2	5	"
HAT CREEK 1 Surface Water	(5081018-07)	Sampled:08/23/05 16:00	Received:08/24/05 13	3:22	
pH	pH Units	8.50	0.01	0.01	SM 4500H+
Alkalinity as CaCO3	mg/l	65 NB	2	5	SM 2320B
Hydroxide Bicarbonate	"	ND 79	2 2	5 5	
Carbonate	"	ND	2	5	п
Specific Conductance	umhos/cm	135	2	10	SM 2510B
HAT CREEK 2 Surface Water	(5081018-08)	Sampled:08/23/05 16:00	Received:08/24/05 13	3:22	
Alkalinity as CaCO3	mg/l	66	2	5	SM 2320B
Hydroxide	"	ND	2	5	"
Bicarbonate	"	81	2	5	"
Carbonate		ND	2 Dansiyad 00 /24 /05 13	5	
	`		Received:08/24/05 13		
Alkalinity as CaCO3	mg/l "	64 ND	2	5	SM 2320B
Hydroxide Bicarbonate	"	ND 78	2 2	5 5	
Dical Dollate		70	2	J	

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521

Attention: CHRIS CURRENS

Project: NPS - BASELINE WATER QUALITY INVENTORY

Analyte	Units	Results	Qualifier	MDL	RL	Method
HAT CREEK 3 Surface Water (50	081018-09) Sam	pled:08/23/0	5 16:00 Recei	ved:08/24/05 1	3:22	
Carbonate	п	ND		2	5	н
MANZANITA CREEK 1 Surface Wa	ter (5081018-10) Sampled:	08/23/05 17:00	Received:08	/24/05 13:22	2
pH	pH Units	8.16		0.01	0.01	SM 4500H+
Alkalinity as CaCO3	mg/l	49		2	5	SM 2320B
Hydroxide	ıı .	ND		2	5	n .
Bicarbonate	11	59		2	5	"
Carbonate	"	ND		2	5	"
Specific Conductance	umhos/cm	102		2	10	SM 2510B
MANZANITA CREEK 2 Surface Wa	iter (5081018-11	l) Sampled:	08/23/05 17:00	Received:08	/24/05 13:22	2
Alkalinity as CaCO3	mg/l	49		2	5	SM 2320B
Hydroxide	II .	ND		2	5	"
Bicarbonate	"	60		2	5	
Carbonate	. (5004040.44	ND	00 (00 (05 45 00	2	5	. "
MANZANITA CREEK 3 Surface Wa	iter (5081018-12	2) Sampled:	08/23/05 17:00	Received:08	/24/05 13:22	2
Alkalinity as CaCO3	mg/l	50		2	5	SM 2320B
Hydroxide	11	ND		2	5	"
Bicarbonate	"	61		2	5	"
Carbonate	"	ND		2	5	"
MANZANITA LAKE 1 Surface Water	er (5081018-13)	Sampled:08	8/23/05 17:30	Received:08/2	24/05 13:22	
pH	pH Units	9.62		0.01	0.01	SM 4500H+
Alkalinity as CaCO3	mg/l	47		2	5	SM 2320B
Hydroxide	"	ND		2	5	"
Bicarbonate	"	31		2	5	"
Carbonate		13		2	5	
Specific Conductance	umhos/cm	95		2	10	SM 2510B
MANZANITA LAKE 2 Surface Water	er (5081018-14)	Sampled:08	8/23/05 17:30	Received:08/2	24/05 13:22	
Alkalinity as CaCO3	mg/l	47		2	5	SM 2320B
Hydroxide	ıı .	ND		2	5	"
Bicarbonate		33		2	5	
Carbonate	"	12		2	5	"
MANZANITA LAKE 3 Surface Water	er (5081018-15)	Sampled:08	8/23/05 17:30	Received:08/2	24/05 13:22	
Alkalinity as CaCO3	mg/l	47		2	5	SM 2320B
Hydroxide	11	ND		2	5	"
Bicarbonate	II .	28		2	5	"
Carbonate	"	14		2	5	"
LAKE HELEN 1 Surface Water (5	5081018-22) San	npled:08/24/	05 09:30 Rece	eived:08/24/05	13:22	
pH	pH Units	6.63		0.01	0.01	SM 4500H+
Alkalinity as CaCO3	mg/l	3	J	2	5	SM 2320
Hydroxide	11	ND		2	5	II .
Bicarbonate	II .	4	J	2	5	"
Carbonate		ND		2	5	"
Specific Conductance	umhos/cm	ND		2	10	SM 2510B

LAKE HELEN 2 Surface Water	(5081018-23)	Sampled:08/24/05 09:30	Received:08/24/05	13:22	
Alkalinity as CaCO3	mg/l	4	J 2	5	SM 2320
Hydroxide	ıı .	ND	2	5	"
Bicarbonate	п	5	2	5	"
Carbonate	ıı .	ND	2	5	"
LAKE HELEN 3 Surface Water	(5081018-24)	Sampled:08/24/05 09:30	Received:08/24/05	13:22	
Alkalinity as CaCO3	mg/l	4	J 2	5	SM 2320

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521

Attention: CHRIS CURRENS

Project: NPS - BASELINE WATER QUALITY INVENTORY

Analyte	Units	Results (Qualifier	MDL	RL	Method
LAKE HELEN 3 Surface Water	(5081018-24)	Sampled:08/24/05	09:30 Re	eceived:08/24/05 13	:22	
Hydroxide	ıı .	ND		2	5	п
Bicarbonate	ıı .	5		2	5	II .
Carbonate	п	ND		2	5	II .
EMERALD LAKE 1 Surface Water	er (5081018-25) Sampled:08/24/	05 10:00	Received:08/24/05	13:22	
pH	pH Units	7.23		0.01	0.01	SM 4500H+
Alkalinity as CaCO3	mg/l	7		2	5	SM 2320B
Hydroxide	II .	ND		2	5	II .
Bicarbonate	"	9		2	5	"
Carbonate		ND		2	5	"
Specific Conductance	umhos/cm	9	J	2	10	SM 2510
EMERALD LAKE 2 Surface Water	er (5081018-26) Sampled:08/24/	05 10:00	Received:08/24/05	13:22	
Alkalinity as CaCO3	mg/l	7		2	5	SM 2320B
Hydroxide	II .	ND		2	5	II .
Bicarbonate	"	9		2	5	"
Carbonate	"	ND		2	5	"
EMERALD LAKE 3 Surface Water	er (5081018-27) Sampled:08/24/	05 10:00	Received:08/24/05	13:22	
Alkalinity as CaCO3	mg/l	5		2	5	SM 2320B
Hydroxide	"	ND		2	5	"
Bicarbonate	"	6		2	5	"
Carbonate	"	ND		2	5	"
MILL CREEK 1 Surface Water	(5081018-28)	Sampled:08/24/05	11:00 Re	eceived:08/24/05 13	:22	
pH	pH Units	7.39		0.01	0.01	SM 4500H+
Alkalinity as CaCO3	mg/l	18		2	5	SM 2320B
Hydroxide	"	ND		2	5	"
Bicarbonate "		22		2	5	
Carbonate		ND		2	5	
Specific Conductance	umhos/cm	64		2	10	SM 2510B
MILL CREEK 2 Surface Water	(5081018-29)	Sampled:08/24/05	11:00 Re	eceived:08/24/05 13	:22	
Alkalinity as CaCO3	mg/l	19		2	5	SM 2320B
Hydroxide	II.	ND		2	5	II.
Bicarbonate	"	23		2	5	"
Carbonate		ND		2	5	"
MILL CREEK 3 Surface Water	(5081018-30)	Sampled:08/24/05	11:00 Re	eceived:08/24/05 13	:22	
Alkalinity as CaCO3	mg/l	19		2	5	SM 2320B

Hydroxide	II .	ND	2	5	"
Bicarbonate	II .	23	2	5	"
Carbonate	"	ND	2	5	"

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521

Attention: CHRIS CURRENS

Project: NPS - BASELINE WATER QUALITY INVENTORY

Microbiology

Analyte	Units	Results Qualifie	er MDL	RL	Method
MANZANITA LAKE 1 Surface Wa	ater (5081018-16)	Sampled:08/24/05 0	8:00 Received:08/24/0	5 13:22	
Total Coliforms	MPN/100 ml	49		2	SM 9221B/E
Fecal Coliforms	u .	<2		2	"
MANZANITA LAKE 2 Surface Wa	ater (5081018-17)	Sampled:08/24/05 0	8:00 Received:08/24/0	5 13:22	
Total Coliforms	MPN/100 ml	49		2	SM 9221B/E
Fecal Coliforms	п	<2		2	u u
MANZANITA LAKE 3 Surface Wa	ater (5081018-18)	Sampled:08/24/05 0	8:00 Received:08/24/0	5 13:22	
Total Coliforms	MPN/100 ml	33		2	SM 9221B/E
Fecal Coliforms	п	<2		2	"
SUMMIT LAKE 1 Surface Water	r (5081018-19) S	Sampled:08/24/05 09:0	0 Received:08/24/05 13	3:22	
Total Coliforms	MPN/100 ml	8		2	SM 9221B/E
Fecal Coliforms	II .	<2		2	"
SUMMIT LAKE 2 Surface Water	r (5081018-20) S	Sampled:08/24/05 09:0	0 Received:08/24/05 13	3:22	
Total Coliforms	MPN/100 ml	17		2	SM 9221B/E
Fecal Coliforms	II .	2		2	"
SUMMIT LAKE 3 Surface Water	r (5081018-21) S	Sampled:08/24/05 09:0	0 Received:08/24/05 13	3:22	
Total Coliforms	MPN/100 ml	9		2	SM 9221B/E
Fecal Coliforms	II .	2		2	"
LAKE HELEN 1 Surface Water	(5081018-22) Sar	mpled:08/24/05 09:30	Received:08/24/05 13:2	22	
Total Coliforms	MPN/100 ml	<2		2	SM 9221B/E
Fecal Coliforms	п	<2		2	"
LAKE HELEN 2 Surface Water	(5081018-23) Sar	mpled:08/24/05 09:30	Received:08/24/05 13:2	22	
Total Coliforms	MPN/100 ml	<2		2	SM 9221B/E
Fecal Coliforms	п	<2		2	"
LAKE HELEN 3 Surface Water	(5081018-24) Sar	mpled:08/24/05 09:30	Received:08/24/05 13:2	22	
Total Coliforms	MPN/100 ml	<2		2	SM 9221B/E
Fecal Coliforms	п	<2		2	"

EMERALD LAKE 1 Surface Water	(5081018-25)	Sampled:08/24/05 10:00	Received:08/24/05 13:22	
Total Coliforms	MPN/100 ml	8	2	SM 9221B/E
Fecal Coliforms	"	<2	2	"
EMERALD LAKE 2 Surface Water	(5081018-26)	Sampled:08/24/05 10:00	Received:08/24/05 13:22	
Total Coliforms	MPN/100 ml	9	2	SM 9221B/E
Fecal Coliforms	"	<2	2	"
EMERALD LAKE 3 Surface Water	(5081018-27)	Sampled:08/24/05 10:00	Received:08/24/05 13:22	
Total Coliforms	MPN/100 ml	11	2	SM 9221B/E
Fecal Coliforms	II .	<2	2	· ·

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521 Attention: CHRIS CURRENS

Project: NPS - BASELINE WATER QUALITY INVENTORY

Quality Control Data

Analyte		Result	RL	Units General	Spike Level Chemistr	Source Result	%REC	%REC Limits
Batch B5H0595 - Gene	aral Bran. CC			Corrorar	OTTOTT HOLE	J		
Batth Bonubyo - Gene	erai Prep - GC							
LCS								
рН		7.03		pH Units	7.00		100	80-120
Duplicate	Source: 5081005-01							
рН		9.29	0.01	pH Units		9.28		
Duplicate	Source: 5081012-01							
рН		8.19	0.01	pH Units		8.18		
Batch B5H0657 - Gene	eral Prep - GC							
Blank								
Alkalinity as CaCO3		ND	5	mg/l				
Hydroxide		ND	5	mg/l				
Bicarbonate		ND	5	mg/l				
Carbonate		ND	5	mg/l				
LCS								
Alkalinity as CaCO3		0.05		mg/l	0.0500		100	80-120

Duplicate	Source: 5081018-01							
Alkalinity as CaCO3		19.0	5	mg/l		18		
Duplicate	Source: 5081018-11							
Alkalinity as CaCO3		49.0	5	mg/l		49		
Batch B5H0729 - Gen	eral Prep - GC							
Blank								
Specific Conductance		ND	10	umhos/cm				
LCS								
Specific Conductance		103		umhos/cm	100		103	80-120
Duplicate	Source: 5080991-01							
Specific Conductance		364	10	umhos/cm		366		
Duplicate	Source: 5081018-22							
Specific Conductance		ND	10	umhos/cm		ND		
Batch B510013 - Gene	eral Prep - GC							
Blank								
Alkalinity as CaCO3		ND	5	mg/l				
Hydroxide		ND	5	mg/l				
Bicarbonate		ND	5	mg/l				
Carbonate		ND	5	mg/l				
LCS								
Alkalinity as CaCO3		0.05		mg/l	0.0500		100	80-120
Duplicate	Source: 5081018-27							
Alkalinity as CaCO3		6.0	5	mg/l		5		

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521 Attention: CHRIS CURRENS

Project: NPS - BASELINE WATER QUALITY INVENTORY

Notes and Definitions

	notes and Deminions
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag). The J flag is equivalent to the DNQ E
A-01	<2
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the detection limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
<	Less than reporting limit
<u><</u>	Less than or equal to reporting limit
>	Greater than reporting limit
<u>></u>	Greater than or equal to reporting limit

MDL Method Detection Limit

RL/ML Minimum Level of Quantitation

MCL/AL Maxium Contaminant Level/Action Level

mg/kg Results reported as wet weight
TTLC Total Threshold Limit Concentration
STLC Soluble Threshold Limit Concentration
TCLP Toxicity Characteristic Leachate Procedure

Approved By
Basic Laboratory, Inc.
California D.O.H.S. Cert #1677

Lab No: 5081018 **Reported:** 09/07/05

Phone: (707) 825-5189

Analyzed	Prepared	Batch
08/24/05 08/27/05	08/24/05 08/27/05	B5H0595 B5H0657
08/31/05	08/31/05	B5H0729
08/27/05	08/27/05	B5H0657
11	n n	
08/27/05	08/27/05	B5H0657
"	n n	
u	"	"
08/24/05 08/27/05	08/24/05 08/27/05	B5H0595 B5H0657
"		
08/31/05	08/31/05	B5H0729
08/27/05	08/27/05	B5H0657
11	u u	" "
08/27/05	08/27/05	B5H0657
"	"	"
"	11	u
08/24/05 08/27/05	08/24/05 08/27/05	B5H0595 B5H0657
		"
08/31/05	08/31/05	B5H0729
08/27/05	08/27/05	B5H0657
	n n	
08/27/05	08/27/05	B5H0657
00/2//03	"	"
	**	

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Lab No: 5081018 **Reported:** 09/07/05

Phone: (707) 825-5189

1	Analyzed	Prepared	Batch	
	u	08/27/05	п	
	08/24/05 08/27/05	08/24/05 08/27/05	B5H0595 B5H0657	
	" "	" "	" "	
	08/31/05	08/31/05	B5H0729	
	08/27/05	08/27/05	B5H0657	
	"	11	n n	
	08/27/05	08/27/05	B5H0657	
	n n	n n	n n	
	08/24/05	08/24/05	B5H0595	
	08/27/05	08/27/05	B5H0657	
	" " 08/31/05	" " 08/31/05	" " B5H0729	
	08/27/05	08/27/05	B5H0657	
	" "	"	B3110037	
	"	п	п	
	08/27/05	08/27/05	B5H0657 "	
	n .	n	п	
В	08/24/05	08/24/05 08/27/05	B5H0595 08/27/05	B5H0657
	"	n n	n n	"
	08/31/05	08/31/05	B5H0729	

В		08/27/05	08/27/05	B5H0657
		II .		
	"	II .	· ·	
	"	II .	· ·	
В		08/27/05	08/27/05	B5H0657

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Lab No: 5081018 **Reported:** 09/07/05

Phone: (707) 825-5189

	Analyzed	Prepared	Batch	
		08/27/05	п	
	"	II .	п	
	"	u	"	
	08/24/05	08/24/05	B5H0595	
	08/27/05	08/27/05	B5H0657	
			"	
В		08/31/05	08/31/05	B5H0729
	08/27/05	08/27/05	B5H0657	
	"	"	"	
		u .	u u	
	"	и	п	
	08/29/05	08/29/05	B5I0013	
		ш	п	
	"	п	п	
	08/24/05	08/24/05	B5H0595	
	08/29/05	08/29/05	B5I0013	
		п	п	
		"	u.	
	08/31/05	08/31/05	B5H0729	
	08/29/05	08/29/05	B5I0013	
	"	II .	ıı .	
	"	n n	n n	
	08/29/05	08/29/05	B5I0013	

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Lab No: 5081018 **Reported:** 09/07/05

Phone: (707) 825-5189

Analyzed	Prepared	Batch
08/28/05	08/24/05	B5H0672
08/28/05	08/24/05	B5H0672 "
08/28/05	08/24/05	B5H0672
08/28/05	08/24/05	B5H0672 "
08/28/05	08/24/05	B5H0672

 08/28/05
 08/24/05
 B5H0672

 08/28/05
 08/24/05
 B5H0672

 08/28/05
 08/24/05
 B5H0672

 08/28/05
 08/24/05
 B5H0672

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Lab No: 5081018 **Reported:** 09/07/05

Phone: (707) 825-5189

P.O. #

RPD RPD Qualifier

0.108 20

0.122 20

5.41 20

0.00 20

0.548 20

20

18.2 20

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Lab No: 5081018

Reported: 09/07/05

Phone: (707) 825-5189

P.O. #

stimated Concentration flag.

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521 Attention: CHRIS CURRENS

Project: NPS - BASELINE WATER QUALITY INVENTORY

Analyte	Units	Results	Qualifier	MDL	RL		Method
SILVER LAKE 1 Surface Water	(5081172-01) Sa	mpled:08/29	9/05 18:00 Rece	ived:08/30/05	5 15:05		
рН	pH Units	7.10		0.01	0.01		SM 4500H+
Alkalinity as CaCO3	mg/l	4	J		2	5	SM 23:
Hydroxide	"	ND _		2	5		"
Bicarbonate Carbonate		5 ND		2 2	5 5		
Specific Conductance	umhos/cm	3	1		2	10	SM 25
SILVER LAKE 2 Surface Water		mpled:08/29	9/05 18:00 Rece	ived:08/30/05			3111 23
pH	pH Units	7.14		0.01	0.01		SM 4500H+
Alkalinity as CaCO3	mg/l	4	J		2	5	SM 23:
Hydroxide	п	ND		2	5		ш
Bicarbonate	"	5		2	5		
Carbonate	"	ND		2	5	10	" CM 2E
Specific Conductance FEATHER LAKE 1 Surface Water	umhos/cm - (5081172-03) \$	3 Sampled:08/	29/05 18:40 Red	ceived:08/30/	2 05 15:05	10	SM 25
pH	pH Units	6.50	27,00 10.10 110.	0.01	0.01		SM 4500H+
Alkalinity as CaCO3	mg/l	3	J		2	5	SM 23:
Hydroxide	"	ND	_	2	- 5	-	"
Bicarbonate	u	4	J		2	5	u
Carbonate	II .	ND		2	5		u .
Specific Conductance	umhos/cm	ND		2	10		SM 2510B
FEATHER LAKE 2 Surface Water	(5081172-04)	Sampled:08/	29/05 18:40 Red	ceived:08/30/	05 15:05		
pH	pH Units	6.50		0.01	0.01		SM 4500H+
Alkalinity as CaCO3	mg/l	3	J		2	5	SM 23:
Hydroxide		ND		2	5	_	
Bicarbonate Carbonate	п	4 ND	J	2	2 5	5	п
Specific Conductance	umhos/cm	ND		2	10		SM 2510B
RAINBOW LAKE 1 Surface Water			/30/05 08:30 Re	eceived:08/30			S 2010D
рН	pH Units	7.19		0.01	0.01		SM 4500H+
Alkalinity as CaCO3	mg/l	12		2	5		SM 2320B
Hydroxide	n n	ND		2	5		п
Bicarbonate	п	15		2	5		п
Carbonate	. ,	ND		2	5		"
Specific Conductance	umhos/cm	8	/00 /05 00 00 D		2	10	SM 25
RAINBOW LAKE 2 Surface Water	,	•	/30/05 08:30 Re	eceived:08/30			
pH	pH Units	7.15		0.01	0.01		SM 4500H+
Alkalinity as CaCO3	mg/l	12 ND		2 2	5 5		SM 2320B
Hydroxide Bicarbonate	п	15		2	5		
Carbonate	u	ND		2	5		п
Specific Conductance	umhos/cm	9	J		2	10	SM 25
UPPER TWIN LAKE 1 Surface W	ater (5081172-07) Sampled:	08/30/05 09:30	Received:08/	30/05 15:	05	
рН	pH Units	6.63		0.01	0.01		SM 4500H+
Alkalinity as CaCO3	mg/l	3	J		2	5	SM 23:
Hydroxide	11	ND		2	5		"
Bicarbonate	"	4	J		2	5	"
Carbonate		ND		2	5		
Specific Conductance UPPER TWIN LAKE 2 Surface W	umhos/cm /ater (5081172-08	ND Sampled :	08/30/05 09:30	2 Received:08/	10 30/05 15 :	05	SM 2510B
	•	•	00/ 30/ 03 07.30			55	CM 4FOCU
pH	pH Units	6.68		0.01	0.01		SM 4500H+

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521 Attention: CHRIS CURRENS

Project: NPS - BASELINE WATER QUALITY INVENTORY

Analyte		Units	Results	Qualifier	MDL	RL		Method
UPPER TWIN LAKE 2	Surface Water	(5081172-08)	Sampled:0	08/30/05 09:30	Received:08	3/30/05 15	:05	
Alkalinity as CaCO3		mg/l	3	J		2	5	SM 23:
Hydroxide		"	ND		2	5		II .
Bicarbonate		ıı .	4	J		2	5	ıı ı
Carbonate		"	ND		2	5		"
Specific Conductance		umhos/cm	ND		2	10		SM 2510B
LOWER TWIN LAKE 1	Surface Water	(5081172-12)	Sampled:	08/30/05 10:30	Received:08/30/05 15:05			
pH		pH Units	7.00		0.01	0.01		SM 4500H+
Alkalinity as CaCO3		mg/l	5		2	5		SM 2320B
Hydroxide		"	ND		2	5		II .
Bicarbonate		"	6		2	5		"
Carbonate		"	ND		2	5		II .
Specific Conductance		umhos/cm	4	J		2	10	SM 25
LOWER TWIN LAKE 2	Surface Water	(5081172-13)	Sampled:	08/30/05 10:30	Received:0	8/30/05 1!	5:05	
pH		pH Units	6.93		0.01	0.01		SM 4500H+
Alkalinity as CaCO3		mg/l	5		2	5		SM 2320B
Hydroxide			ND		2	5		· ·
Bicarbonate		· ·	6		2	5		II.
Carbonate		п	ND		2	5		· ·
Specific Conductance		umhos/cm	4	J		2	10	SM 25

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521 Attention: CHRIS CURRENS

Project: NPS - BASELINE WATER QUALITY INVENTORY

Microbiology

Analyte		Units	Results	Qualifier	MDL	RL	Method
UPPER TWIN LAKE 1	Surface Water	(5081172-09)	Sampled:08	3/30/05 09:30	Received:08/30/	′ 05 15:05	
Total Coliforms Fecal Coliforms		MPN/100 ml	5 <2			2 2	SM 9221B/E
UPPER TWIN LAKE 2	Surface Water	(5081172-10)	Sampled:08	3/30/05 09:30	Received:08/30/	' 05 15:05	
Total Coliforms Fecal Coliforms	Confees Weten	MPN/100 ml	<2 <2) /20 /0F 00 ·20	Danaina d.00 /20	2	SM 9221B/E
UPPER TWIN LAKE 3	Surrace water	(5081172-11)	Sampled:08	3/30/05 09:30	Received:08/30/	05 15:05	
Total Coliforms Fecal Coliforms		MPN/100 ml	6 <2			2 2	SM 9221B/E
LOWER TWIN LAKE 1	Surface Water	(5081172-14)	Sampled:0	8/30/05 10:30	Received:08/30	/05 15:05	1
Total Coliforms Fecal Coliforms		MPN/100 ml	23 <2			2 2	SM 9221B/E
LOWER TWIN LAKE 2	Surface Water	(5081172-15)	Sampled:0	8/30/05 10:30	Received:08/30	/05 15:05	
Total Coliforms		MPN/100 ml	7			2	SM 9221B/E

 Fecal Coliforms
 " <2</th>
 2 "

 LOWER TWIN LAKE 3
 Surface Water
 (5081172-16)
 Sampled:08/30/05 10:30
 Received:08/30/05 15:05

 Total Coliforms
 MPN/100 ml
 5
 2
 SM 9221B/E

 Fecal Coliforms
 " <2</th>
 2
 " <2</th>

Approved By

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521 Attention: CHRIS CURRENS

Project: NPS - BASELINE WATER QUALITY INVENTORY

Quality Control Data

					Spike	Source		%REC
Analyte		Result	RL	Units	Level	Result	%REC	Limits
				General	Chemist	ry		
Batch B5H0699 - General I	Prep - GC							
LCS								
рН		7.03		pH Units	7.00		100	80-120
Duplicate	Source: 5081164-01							
рН		8.18	0.01	pH Units		8.17		

Duplicate pH	Source: 5081172-08	6.69	0.01	pH Units		6.68		
Batch B510054 - General P	Prep - GC							
Blank								
Specific Conductance		ND	10	umhos/cm				
LCS								
Specific Conductance		102		umhos/cm	100		102	80-120
Duplicate	Source: 5080826-01							
Specific Conductance		241	10	umhos/cm		241		
Duplicate	Source: 5081172-06							
Specific Conductance		9.00	10	umhos/cm		9		
Batch B510104 - General P	Prep - GC							
Blank								
Dialik								
Alkalinity as CaCO3		ND	5	mg/l				
Alkalinity as CaCO3 Hydroxide		ND	5	mg/l				
Alkalinity as CaCO3 Hydroxide Bicarbonate		ND ND	5 5	mg/l mg/l				
Alkalinity as CaCO3 Hydroxide		ND	5	mg/l				
Alkalinity as CaCO3 Hydroxide Bicarbonate		ND ND	5 5	mg/l mg/l				
Alkalinity as CaCO3 Hydroxide Bicarbonate Carbonate		ND ND	5 5	mg/l mg/l	0.0500		100	80-120
Alkalinity as CaCO3 Hydroxide Bicarbonate Carbonate LCS	Source: 5081172-01	ND ND ND	5 5	mg/l mg/l mg/l	0.0500		100	80-120
Alkalinity as CaCO3 Hydroxide Bicarbonate Carbonate LCS Alkalinity as CaCO3	Source: 5081172-01	ND ND ND	5 5	mg/l mg/l mg/l	0.0500	4	100	80-120
Alkalinity as CaCO3 Hydroxide Bicarbonate Carbonate LCS Alkalinity as CaCO3 Duplicate	Source: 5081172-01 Source: 5081191-01	ND ND ND	5 5 5	mg/l mg/l mg/l mg/l	0.0500	4	100	80-120

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521 Attention: CHRIS CURRENS

Project: NPS - BASELINE WATER QUALITY INVENTORY

Notes and Definitions

J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag). The J flag is equivalent to the DNQ Estimation

A-01 <2

Analyte DETECTED DET

Analyte NOT DETECTED at or above the detection limit ND

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference < Less than reporting limit

 \leq Less than or equal to reporting limit

> Greater than reporting limit

 \geq Greater than or equal to reporting limit

MDL Method Detection Limit

RL/ML Minimum Level of Quantitation

MCL/AL Maxium Contaminant Level/Action Level

mg/kg Results reported as wet weight
TTLC Total Threshold Limit Concentration
STLC Soluble Threshold Limit Concentration
TCLP Toxicity Characteristic Leachate Procedure

Approved By
Basic Laboratory, Inc.
California D.O.H.S. Cert #1677

Lab No: 5081172 **Reported:** 09/08/05

Phone: (707) 825-5189

ļ	Analyzed	Prepared	Batch	
20B	08/30/05	08/30/05 09/06/05 "	B5H0699 09/06/05	B5I0104
	"		"	
10B		09/02/05	09/02/05	B510054
20B	08/30/05	08/30/05 09/06/05	B5H0699 09/06/05	B5I0104
	"	"	"	
10B		09/02/05	09/02/05	B510054
20B	08/30/05	08/30/05 09/06/05	B5H0699 09/06/05	B5I0104
	"	"		"
	"	п	п	
	09/02/05	09/02/05	B510054	
	08/30/05	08/30/05	B5H0699	
20B		09/06/05	09/06/05	B5I0104
		и	"	"
	"	п		
	09/02/05	09/02/05	B510054	
	08/30/05	08/30/05	B5H0699	
	09/06/05	09/06/05	B5I0104	
	"	u		
	"	"	"	
10B		09/02/05	09/02/05	B510054
	08/30/05	08/30/05	B5H0699	
	09/06/05	09/06/05	B5I0104	
	"	п		
	"	u	"	
10B		09/02/05	09/02/05	B510054
20B	08/30/05	08/30/05 09/06/05	B5H0699 09/06/05	B5I0104
		п		"
	09/02/05	09/02/05	" B510054	
	08/30/05	08/30/05	B5H0699	

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Lab No: 5081172 **Reported:** 09/08/05

Phone: (707) 825-5189

Analyzed	Prepared	Batch	
20B	09/06/05	09/06/05	B510104
	ıı .		ıı
п	II .	п	
09/02/05	09/02/05	B510054	
08/30/05	08/30/05	B5H0699	
09/06/05	09/06/05	B5I0104	
"	"	"	
п	II .	п	
п	n .	"	
10B	09/02/05	09/02/05	B510054
08/30/05	08/30/05	B5H0699	
09/06/05	09/06/05	B5I0104	
u	II .		
п	n .	"	
п	n .	"	
10B	09/02/05	09/02/05	B510054

Page 3 of 6

Lab No: 5081172 **Reported:** 09/08/05

Phone: (707) 825-5189

Analyzed	Prepared	Batch
09/03/05	08/30/05	B5I0101
09/03/05	08/30/05	B510101

u u

09/03/05 08/30/05 B5I0101

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Lab No: 5081172 **Reported:** 09/08/05

Phone: (707) 825-5189

P.O. #

RPD

RPD Limit Qualifier

0.150 20

0.00 20

0.00 20 J

0.00 20 J

0.00 20

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Lab No: 5081172 **Reported:** 09/08/05

Phone: (707) 825-5189

P.O. #

ted Concentration flag.

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521

Attention: CHRIS CURRENS

Project: NPS - BASELINE WATER QUALITY INVENTORY Lassen WQ

General Chemistry

	-					
Analyte	Units	Results	Qualifier	MDL	RL	
CRUMBAUGH LAKE 1	Water (5081201-01)	Sampled:08/31/05	09:30 Received:0	8/31/05 15:01		
pН	pH Units	6.92		0.01	0.01	- 1
Alkalinity as CaCO3	mg/l	5		2	5	
Hydroxide	"	ND		2	5	
Bicarbonate		6 ND		2	5 5	
Carbonate Specific Conductance	umhos/cm	36		2 2	5 10	
CRUMBAUGH LAKE 2		Sampled:08/31/05	09:30 Received:0	8/31/05 15:01	10	
	,	5	07.50 Received.0		E	
Alkalinity as CaCO3 Hydroxide	mg/l	ND		2 2	5 5	
Bicarbonate		6		2	5	
Carbonate	"	ND		2	5	
CRUMBAUGH LAKE 3	Water (5081201-03)	Sampled:08/31/05	09:30 Received:0	8/31/05 15:01		
Alkalinity as CaCO3	mg/l	5		2	5	
Hydroxide	"	ND		2	5	
Bicarbonate	"	6		2	5	
Carbonate	· ·	ND		2	5	
TERRACE 1 Water	(5081201-07) Sampled	:08/31/05 10:30 R	eceived:08/31/05	15:01		
pН	pH Units	6.02		0.01	0.01	1
Alkalinity as CaCO3	mg/l	ND		2	5	
Hydroxide	"	ND		2	5	
Bicarbonate	"	ND		2	5	
Carbonate		ND		2	5	
Specific Conductance	umhos/cm	ND		2	10	
TERRACE 2 Water	(5081201-08) Sampled	:08/31/05 10:30 R	eceived:08/31/05	15:01		
Alkalinity as CaCO3	mg/l	ND		2	5	
Hydroxide	"	ND		2	5	
Bicarbonate		ND ND		2 2	5 5	
Carbonate TERRACE 3 Water	(5081201-09) Sampled		eceived:08/31/05		Э	
Alkalinity as CaCO3	mg/l	2 ND	J	2		
Hydroxide Bicarbonate		ND 2	J	2	5 2 5	
Carbonate		ND	3	2	5	
	081201-13) Sampled:08		eived:08/31/05 15:		· ·	
рН	pH Units	8.75		0.01	0.01	
Alkalinity as CaCO3	mg/l	26		2	5	
Hydroxide	3	ND		2	5	
Bicarbonate		32		2	5	
Carbonate	"	ND		2	5	
Specific Conductance	umhos/cm	49		2	10	
BUTTE 2 Water (50	081201-14) Sampled:08	3/31/05 13:00 Rec	eived:08/31/05 15:	01		
Alkalinity as CaCO3	mg/l	27		2	5	
Hydroxide	"	ND		2	5	
Bicarbonate	"	33		2	5	
Carbonate		ND		2	5	
BUTTE 3 Water (50	081201-15) Sampled:08	3/31/05 13:00 Rec	eived:08/31/05 15:	UT		
Alkalinity as CaCO3	mg/l	27		2	5	
Hydroxide	"	ND		2	5	
Bicarbonate	-	33		2	5	

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521

Attention: CHRIS CURRENS

Project: NPS - BASELINE WATER QUALITY INVENTORY Lassen WQ

General Chemistry

Analyte	Units	Results	Qualifier	MDL	RL
BUTTE 3 Water (50812	201-15) Sampled:08/31/	05 13:00 Rece	ived:08/31/05 15	5:01	
Carbonate	u	ND		2	5

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California D.O.H.S. Cert #1677

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521 Attention: CHRIS CURRENS

Project: NPS - BASELINE WATER QUALITY INVENTORY Lassen WQ

Microbiology

Analyte		Units	Result	ts Qua	alifier	MDL	RL	
CRUMBAUGH LAKE	1 Water (50	081201-04)	Sampled:08/3	1/05 09:30	Received:0	08/31/05 15:01		
Total Coliforms		MPN/100 m	17				2	!
Fecal Coliforms		11	<2				2	
CRUMBAUGH LAKE	2 Water (50	081201-05)	Sampled:08/3	1/05 09:30	Received:	08/31/05 15:01		
Total Coliforms		MPN/100 m					2	!
Fecal Coliforms		"	<2				2	
CRUMBAUGH LAKE	3 Water (50	081201-06)	Sampled:08/3	1/05 09:30	Received:	08/31/05 15:01		
Total Coliforms		MPN/100 m					2	:
Fecal Coliforms			<2				2	
TERRACE 1 Water	(5081201-10	D) Sampled	:08/31/05 10:3	0 Received	d:08/31/05	15:01		
Total Coliforms		MPN/100 m					2	:
Fecal Coliforms		-	<2				2	
TERRACE 2 Water	(5081201-11	1) Sampled	:08/31/05 10:3	0 Received	d:08/31/05	15:01		
Total Coliforms		MPN/100 m					2	!
Fecal Coliforms	/	-	<2				2	
TERRACE 3 Water	(5081201-12	2) Sampled	:08/31/05 10:3	O Received	1:08/31/05	15:01		
Total Coliforms		MPN/100 ml					2	:
Fecal Coliforms	F004004 4()		<2	D	0 /04 /05 45	0.4	2	
,	5081201-16)	•	/31/05 13:00	Receivea:0	8/31/05 15	:01		
Total Coliforms		MPN/100 ml					2	;
Fecal Coliforms	F004204 47\	Camanda da OO	<2	Danailus di O	0 /24 /05 45	.04	2	
,	5081201-17)	•	/31/05 13:00	Receivea:0	8/31/05 15	:01		
Total Coliforms		MPN/100 m					2	:
Fecal Coliforms	E004204 40\	Camanda da OO	<2	Danailus di O	0 /24 /05 45	.04	2	
,	5081201-18)	•	/31/05 13:00	Received:0	8/31/05 15	:01		
Total Coliforms		MPN/100 m					2	!
Fecal Coliforms			<2				2	

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521

Attention: CHRIS CURRENS

Project: NPS - BASELINE WATER QUALITY INVENTORY Lassen WQ

Quality Control Data

Analyte	Result	RL	Units	Spike Level	Source Result	%REC
			Gene	ral Chemist	ry	
Batch B5H0739 - General	Prep - GC					
LCS						
pH	7.01		pH Units	7.00		100
Duplicate	Source: 5081199-01					
рН	7.54	0.01	pH Units		7.53	
Batch B510055 - General	Prep - GC					
Blank						
Specific Conductance	ND	10	umhos/cm			
LCS						
Specific Conductance	99.0		umhos/cm	100		99.0
Duplicate	Source: 5081201-01					
Specific Conductance	40.0	10	umhos/cm		36	
Batch B510106 - General	Prep - GC					
Blank						
Alkalinity as CaCO3	ND	5	mg/l			
Hydroxide	ND	5	mg/l			

Bicarbonate		ND	5	mg/l			
Carbonate		ND	5	mg/l			
LCS							
Alkalinity as CaCO3	(0.05		mg/l	0.0500		100
Duplicate	Source: 5090055-01						
Alkalinity as CaCO3	:	23.0	5	mg/l		23	
Duplicate	Source: 5090055-11						
Alkalinity as CaCO3		6.0	5	mg/l		6	
Batch B510284 - Genera	al Prep - GC						
Blank							
Alkalinity as CaCO3		ND	5	mg/l			
Hydroxide		ND	5	mg/l			
Bicarbonate		ND	5	mg/l			
Carbonate		ND	5	mg/l			
LCS							
Alkalinity as CaCO3	(0.05		mg/l	0.0500		100
Duplicate	Source: 5081201-15						
Alkalinity as CaCO3	2	27.0	5	mg/l		27	
Duplicate	Source: 5090334-04						
Alkalinity as CaCO3		373	5	mg/l		373	

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521 Attention: CHRIS CURRENS

Project: NPS - BASELINE WATER QUALITY INVENTORY Lassen WQ

Notes and Definitions

J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag). The J flag is equivalent to the DNQ Est
A-01	<2
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the detection limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
<	Less than reporting limit
<u><</u>	Less than or equal to reporting limit
>	Greater than reporting limit
<u>></u>	Greater than or equal to reporting limit
MDL	Method Detection Limit
RL/ML	Minimum Level of Quantitation

MCL/AL Maxium Contaminant Level/Action Level

mg/kg Results reported as wet weight
TTLC Total Threshold Limit Concentration
STLC Soluble Threshold Limit Concentration
TCLP Toxicity Characteristic Leachate Procedure

Approved By Basic Laboratory, Inc. California D.O.H.S. Cert #1677 **Lab No:** 5081201 **Reported:** 09/15/05

Phone: (707) 825-5189 **P.O.** # 05WRSA0410

Method	Analyzed	Prepared	Batch	
SM 4500H+	08/31/05	08/31/05	B5H0739	
SM 2320B	09/06/05	09/06/05	B510106	
	u	11	· ·	
SM 2510B	09/02/05	09/02/05	B510055	
SM 2320B	09/06/05	09/06/05	B5I0106	
"	п	II .	п	
SM 2320B	09/06/05	09/06/05	B510106	
"	"	II .	"	
"	"	"	"	
"				
SM 4500H+	08/31/05	08/31/05	B5H0739	
SM 2320B	09/06/05	09/06/05	B510106	
"	u u	II .	"	
"	"	II .	"	
"	"	"	"	
SM 2510B	09/02/05	09/02/05	B510055	
SM 2320B	09/06/05	09/06/05	B5I0106	
"		"		
п	п	II .	п	
SM 2320	ND.	09/06/05	09/06/05	B5I0106
" Z3Z0	"	"	"	D310100
		п	"	"
II .	п	II	п	
SM 4500H+	08/31/05	08/31/05	B5H0739	
SM 2320B	09/06/05	09/06/05	B510734 B510106	
	п	п		
SM 2510B	09/02/05	09/02/05	B510055	
SM 2320B	09/06/05	09/06/05	B5I0106	
"	"	"	"	
"	"	п	"	
11	11	II	II	
SM 2320B	09/13/05	09/13/05	B510284	
"		"		

Page 2 of 6

Lab No: 5081201 **Reported**: 09/15/05

Phone: (707) 825-5189 **P.O.** # 05WRSA0410

Method	Analyzed	Prepared	Batch
u		09/13/05	

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Lab No: 5081201 **Reported:** 09/15/05

Phone: (707) 825-5189 **P.O.** # 05WRSA0410

Method	Analyzed	Prepared	Batch
SM 9221B/E	09/05/05	08/31/05	B5I0101
SM 9221B/E	09/05/05	08/31/05	B5I0101
SM 9221B/E	09/05/05	08/31/05	B5I0101
SM 9221B/E	09/05/05	08/31/05	B5I0101
SM 9221B/E	09/05/05	08/31/05	B5I0101
SM 9221B/E	09/05/05	08/31/05	B5I0101
SM 9221B/E	09/05/05	08/31/05	B5I0101
SM 9221B/E	09/05/05	08/31/05	B5I0101
SM 9221B/E	09/05/05	08/31/05	B5I0101

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Lab No: 5081201 **Reported:** 09/15/05

Phone: (707) 825-5189 **P.O.** # 05WRSA0410

%REC RPD

Limits RPD Limit Qualifier

80-120

0.133 20

80-120

10.5 20

80-120

0.00 20

0.00 20

80-120

0.00 20

0.00 20

Page 5 of 6

Lab No: 5081201 **Reported:** 09/15/05

Phone: (707) 825-5189 **P.O.** # 05WRSA0410

imated Concentration flag.



Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521

Attention: CHRIS CURRENS

Project: NPS - BASELINE WATER QUALITY INVENTORY

General Chemistry

Analyte	Units	Results	Qualifier	MDL	RL	Me
JAKEY LAKE #1 Water (5070874-01)	Sampled:07	/25/05 18:00	Received:07/	26/05 14:59		
Alkalinity as CaCO3	mg/l	8		2	5	SM
Hydroxide Alkalinity	"	ND		2	5	
Bicarbonate	u .	10		2	5	
Carbonate	u .	ND		2	5	
JAKEY LAKE #2 Water (5070874-02)	Sampled:07	/25/05 18:00	Received:07/	26/05 14:59		
pH	pH Units	7.56		0.01	0.01	SM 4
Alkalinity as CaCO3	mg/l	8		2	5	SM
Hydroxide Alkalinity	"	ND		2	5	SIVI .
Bicarbonate	п	9		2	5	
Carbonate	п	ND		2	5	
Specific Conductance	umhos/cm	12		2	10	SM:
JAKEY LAKE #3 Water (5070874-03)	Sampled:07	/25/05 18:00	Received:07/	26/05 14:59		
·	-		110001104.077		_	01.1
Alkalinity as CaCO3	mg/l	8		2	5	SM:
Hydroxide Alkalinity		ND		2	5	
Bicarbonate		10		2	5	
Carbonate		ND		2	5	
HORSESHOE LAKE #1 Water (50708)	74-04) Samp	led:07/26/05 (09:00 Receive	ed:07/26/05 1	4:59	
Alkalinity as CaCO3	mg/l	18		2	5	SM:
Hydroxide Alkalinity	"	ND		2	5	
Bicarbonate	"	21		2	5	
Carbonate	"	ND		2	5	
HORSESHOE LAKE #2 Water (50708	74-05) Samp	led:07/26/05 (09:00 Receive	ed:07/26/05 1	4:59	
pH	pH Units	7.69		0.01	0.01	SM 4
Alkalinity as CaCO3	mg/l	18		2	5	SM:
Hydroxide Alkalinity	"	ND		2	5	
Bicarbonate		21		2	5	
Carbonate	u .	ND		2	5	
Specific Conductance	umhos/cm	30		2	10	SM:
HORSESHOE LAKE #3 Water (50708	74-06) Samp	led:07/26/05	09:00 Receive	ed:07/26/05 1	4:59	
Alkalinity as CaCO3	mg/l	17		2	5	SM:
Hydroxide Alkalinity	"	ND		2	5	JIVI .
Bicarbonate		21		2	5	
Carbonate		ND		2	5	
CRYSTAL LAKE #1 Water (5070874-	07) Sampled	:07/26/05 09:0	O Received:	07/26/05 14:5		
•			o Received.			
Alkalinity as CaCO3	mg/l "	6		2	5	SM:
Hydroxide Alkalinity		ND _		2	5	
Bicarbonate		7		2	5	
Carbonate		ND		2	5	
CRYSTAL LAKE #2 Water (5070874-	08) Sampled	:07/26/05 09:0	DO Received:	07/26/05 14:5	9	
pН	pH Units	7.20		0.01	0.01	SM 4
Alkalinity as CaCO3	mg/l	5		2	5	SM:
Hydroxide Alkalinity	"	ND		2	5	
Bicarbonate	"	6		2	5	
Carbonate		ND		2	5	
Specific Conductance	umhos/cm	7	J	2	10	
CRYSTAL LAKE #3 Water (5070874-	09) Sampled	:07/26/05 09:0	OO Received:	07/26/05 14:5	9	
Alkalinity as CaCO3	mg/l	6		2	5	SM :
Hydroxide Alkalinity		ND		2	5	
Bicarbonate		7		2	5	

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521 Attention: CHRIS CURRENS

Project: NPS - BASELINE WATER QUALITY INVENTORY

General Chemistry

Analyte		U	Jnits	Results O	Qualifier	MDL	RL	Me
CRYSTAL LAKE #3	Water	(5070874-09)	Sampled:0	7/26/05 09:00	Received:0	7/26/05 14:59		
Carbonate				ND		2	5	
JUNIPER LAKE #1	Water	(5070874-10)	Sampled:0	7/26/05 09:00	Received:0	7/26/05 14:59		
Alkalinity as CaCO3			mg/l	7		2	5	SM:
Hydroxide Alkalinity			"	ND		2	5	
Bicarbonate			"	9		2	5	
Carbonate			"	ND		2	5	
JUNIPER LAKE #2	Water	(5070874-11)	Sampled:0	7/26/05 09:00	Received:0	7/26/05 14:59		
pН		рН	H Units	7.00		0.01	0.01	SM 4
Alkalinity as CaCO3			mg/l	7		2	5	SM:
Hydroxide Alkalinity				ND		2	5	
Bicarbonate			"	9		2	5	
Carbonate			"	ND		2	5	
Specific Conductance		um	hos/cm	9	J	2	10	
JUNIPER LAKE #3	Water	(5070874-12)	Sampled:0	7/26/05 09:00	Received:0	7/26/05 14:59		
Alkalinity as CaCO3			mg/l	7		2	5	SM:
Hydroxide Alkalinity				ND		2	5	
Bicarbonate			"	9		2	5	
Carbonate			"	ND		2	5	

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California D.O.H.S. Cert #1677

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521 Attention: CHRIS CURRENS

Project: NPS - BASELINE WATER QUALITY INVENTORY

Microbiology

Analyte	Unit	ts Results	Qualifier	MDL	RL	Me
HORSESHOE LAKE #1	Water (5070874-04)	Sampled:07/26/05 (09:00 Received	d:07/26/05 14	1:59	
Total Coliforms Fecal Coliforms	MPN/10	0 ml 5 <2			2 2	SM 9
HORSESHOE LAKE #2 \	Water (5070874-05)	Sampled:07/26/05 (09:00 Received	d:07/26/05 14	1:59	
Total Coliforms Fecal Coliforms HORSESHOE LAKE #3	MPN/10 "	<2	00.00 Possivo	1.07/24/0E 1/	2 2	SM 9
	•	Sampled:07/26/05 (19:00 Received	1:07726705 14	1.37	014.0
Total Coliforms Fecal Coliforms	MPN/10	0 ml 17 <2			2	SM 9
CRYSTAL LAKE #1 Wat	er (5070874-07) Sa	ampled:07/26/05 09:0	00 Received:07	7/26/05 14:59)	
Total Coliforms Fecal Coliforms	MPN/10	0 ml 70			2	SM 9
CRYSTAL LAKE #2 Wat	er (5070874-08) Sa	ampled:07/26/05 09:0	00 Received:07	7/26/05 14:59)	
Total Coliforms	MPN/10	0 ml 8			2	SM 9

Fecal Coliforms			"	2		2	
CRYSTAL LAKE #3	Water	(5070874-09)	Sample	d:07/26/05 09:00	Received:07/26/05 14:59		
Total Coliforms		MPN	l/100 ml	11		2	SM 9
Fecal Coliforms			"	<2		2	
JUNIPER LAKE #1	Water	(5070874-10)	Sampled	d:07/26/05 09:00	Received:07/26/05 14:59		
Total Coliforms		MPN	l/100 ml	13		2	SM 9
Fecal Coliforms			ii .	<2		2	
JUNIPER LAKE #2	Water	(5070874-11)	Sampled	d:07/26/05 09:00	Received:07/26/05 14:59		
Total Coliforms		MPN	l/100 ml	13		2	SM 9
Fecal Coliforms			ii .	<2		2	
JUNIPER LAKE #3	Water	(5070874-12)	Sampled	d:07/26/05 09:00	Received:07/26/05 14:59		
Total Coliforms		MPN	l/100 ml	17		2	SM 9
Fecal Coliforms			"	<2		2	

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521 Attention: CHRIS CURRENS

Project: NPS - BASELINE WATER QUALITY INVENTORY

Quality Control Data

					Spike	Source		9	
Analyte		Result	RL	Units	Level	Result	%REC	L	
				Gener	al Chemi	stry			
Batch B5G0537 - General Prep - GC									
LCS									
pH		7.03		рН	7.00		100	8	
Duplicate	Source: 5070870-01								
		7.00	0.04			7.00			

pH		7.80	0.01	pH Units		7.82		
Batch B5G0548 - General I	Prep - GC			Unite				
Blank								
Alkalinity as CaCO3		ND	5	mg/l				
Hydroxide Alkalinity		ND	5	mg/l				
Bicarbonate		ND	5	mg/l				
Carbonate		ND	5	mg/l				
LCS								
Alkalinity as CaCO3		0.05		mg/l	0.0500		100	8
Duplicate	Source: 5070659-02							
Alkalinity as CaCO3		107	5	mg/l		108		
Duplicate	Source: 5070874-03							
Alkalinity as CaCO3		8.0	5	mg/l		8		
Batch B5G0581 - General I	Prep - GC							
Blank								
Specific Conductance		ND	10	umhos/				
LCS								
Specific Conductance		106		umhos/	100		106	8
Duplicate	Source: 5070752-01							
Specific Conductance		973	10	umhos/		970		
Duplicate	Source: 5070877-02							
Specific Conductance		78.0	10	umhos/		78		

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521 Attention: CHRIS CURRENS

Project: NPS - BASELINE WATER QUALITY INVENTORY

Notes and Definitions

J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag). The J flag is equivalent to the

A-01 <

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the detection limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference
< Less than reporting limit

 \leq Less than or equal to reporting limit

> Greater than reporting limit

≥ Greater than or equal to reporting limit

MDL Method Detection Limit

RL/ML Minimum Level of Quantitation

MCL/AL Maxium Contaminant Level/Action Level

mg/kg Results reported as wet weight
TTLC Total Threshold Limit Concentration
STLC Soluble Threshold Limit Concentration
TCLP Toxicity Characteristic Leachate Procedure

Approved By
Basic Laboratory, Inc.
California D.O.H.S. Cert #1677

Lab No: 5070874 **Reported:** 08/02/05

Phone: (707) 825-5189

thod	Analyzed	Prepared	Batch	
2320B	07/27/05	07/27/05	B5G0548	
"				
и	п	н	п	
500H+	07/26/05	07/26/05	B5G0537	
2320B "	07/27/05	07/27/05	B5G0548	
"		u u	u u	
" 0540D	07/00/05	07/00/05	"	
2510B	07/28/05	07/28/05	B5G0581	
2320B	07/27/05	07/27/05	B5G0548	
"	u .	ш		
"	п	"	"	
2320B	07/27/05	07/27/05	B5G0548	
"				
и	п	u	п	
500H+	07/26/05	07/26/05	B5G0537	
2320B	07/27/05	07/27/05	B5G0548	
u .	п	п		
п	u	п		
2510B	07/28/05	07/28/05	B5G0581	
2320B	07/27/05	07/27/05	B5G0548	
	n .	п		
и	п	"	п	
2320B	07/27/05	07/27/05	B5G0548	
"		"		
·	п	"	"	
500H+	07/26/05	07/26/05	B5G0537	
2320B	07/27/05	07/27/05	B5G0548	
			"	
"	"	n n	п	
SM 2510E	3	07/28/05	07/28/05	B5G0581
2320B	07/27/05	07/27/05	B5G0548	
"		п	u u	

Page 2 of 6

Lab No: 5070874 **Reported:** 08/02/05

Phone: (707) 825-5189

thod Analyzed Prepared Batch	
" 07/27/05 "	
2320B 07/27/05 07/27/05 B5G0548	3
n n n n	
[500] 07/2//05 07/2//05 DEC0527	,
.500H+ 07/26/05 07/26/05 B5G0537 2320B 07/27/05 07/27/05 B5G0548	
11 11 11 11 11 11 11 11 11 11 11 11 11	
SM 2510B 07/28/05 07/28/05	B5G0581
2320B 07/27/05 07/27/05 B5G0548	3

Page 3 of 6

Lab No: 5070874 **Reported**: 08/02/05

Phone: (707) 825-5189

thod	Analyzed	Prepared	Batch
'221B/E	07/30/05	07/26/05	B5H0011
'221B/E	07/30/05	07/26/05	B5H0011
221B/E	07/30/05	07/26/05	B5H0011
221B/E	07/30/05	07/26/05	B5H0011
221B/E	07/30/05	07/26/05	B5H0011

221B/E 07/30/05 07/26/05 B5H0011 07/30/05 07/26/05 B5H0011 221B/E 07/26/05 B5H0011 07/30/05 221B/E 221B/E 07/30/05 07/26/05 B5H0011

Page 4 of 6

Lab No: 5070874 **Reported:** 08/02/05

Phone: (707) 825-5189

P.O. #

%REC RPD Limit Qualifier

30-120

2051

0.256 20

30-120

0.930 20

0.00 20

30-120

0.309 20

0.00 20

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Lab No: 5070874 **Reported:** 08/02/05

Phone: (707) 825-5189

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521 Attention: CHRIS CURRENS

Project: NPS - BASELINE WATER QUALITY INVENTORY

General Chemistry

	,						
Analyte	U	nits	Results	Qualifier	MDL	RL	Method
EMERALD LAKE Wate	er (5070902-01)	Sampled:07	7/27/05 08:3	0 Received:07	/27/05 13:43	}	
Alkalinity as CaCO3	r	ng/l	6		2	5	SM 2320B
Hydroxide Alkalinity		"	ND		2	5	II .
Bicarbonate		"	7		2	5	u u
Carbonate		"	ND		2	5	u u
EMERALD LAKE Water	er (5070902-02)	Sampled:07	7/27/05 08:3	0 Received:07	/27/05 13:43	}	
pН	На	Units	6.70		0.01	0.01	SM 4500H+
Alkalinity as CaCO3	•	ng/l	6		2	5	SM 2320B
Hydroxide Alkalinity		"	ND		2	5	II .
Bicarbonate		п	7		2	5	II .
Carbonate		"	ND		2	5	"
Specific Conductance	uml	nos/cm	10		2	10	SM 2510B
EMERALD LAKE Water	er (5070902-03)	Sampled:07	7/27/05 08:3	0 Received:07	/27/05 13:43	}	
Alkalinity as CaCO3	r	ng/l	6		2	5	SM 2320B
Hydroxide Alkalinity	'	"	ND		2	5	3101 23200
Bicarbonate			7		2	5	II .
Carbonate		п	ND		2	5	п
LAKE HELEN Water	(5070902-04) Sa	mpled:07/2		Received:07/27		J	
	` ,	•				_	011 00005
Alkalinity as CaCO3	r	ng/l	3	J	2	5	SM 2320E
Hydroxide Alkalinity			ND		2	5 _	
Bicarbonate			4	J	2	5	
Carbonate	(5050000 05) 0		ND	D : 107/0	2	5	
LAKE HELEN Water	(5070902-05) Sa	mpled:07/2	7/05 09:00	Received:07/27	7/05 13:43		
рН	рН	Units	6.13		0.01	0.01	SM 4500H+
Alkalinity as CaCO3	r	ng/I	3	J	2	5	SM 2320E
Hydroxide Alkalinity		"	ND		2	5	"
Bicarbonate		"	4	J	2	5	···
Carbonate		"	ND		2	5	"
Specific Conductance	umh	nos/cm	ND		2	10	SM 2510B
LAKE HELEN Water	(5070902-06) Sa	mpled:07/2	7/05 09:00	Received:07/27	7/05 13:43		
Alkalinity as CaCO3	r	ng/l	3	J	2	5	SM 2320E
Hydroxide Alkalinity		II .	ND		2	5	II .
Bicarbonate		"	4	J	2	5	II .
Carbonate		"	ND		2	5	"
RIDGE LAKE Water	(5070902-07) Sa	mpled:07/2	6/05 15:00	Received:07/27	7/05 13:43		
pН	Hq	Units	6.10		0.01	0.01	SM 4500H+
Alkalinity as CaCO3	r	ng/l	3	J	2	5	SM 2320E
Hydroxide Alkalinity			ND		2	5	"
Bicarbonate		"	4	J	2	5	ıı .
Carbonate		"	ND		2	5	II .
Specific Conductance	umh	nos/cm	97		2	10	SM 2510B
CRUMBAUGH LAKE V	Water (5070902-0	8) Sample	d:07/27/05 1	1:00 Received	1:07/27/05 13	3:43	
Alkalinity as CaCO3	r	ng/I	4	J	2	5	SM 2320E
Hydroxide Alkalinity	·	"	ND	Š	2	5	"
Bicarbonate			5		2	5	"
Carbonate			ND		2	5	"
CRUMBAUGH LAKE V	Water (5070902-0	9) Sample	d:07/27/05 1	1:00 Received	- l:07/27/05 13		
	•	-					CM 4EQQLL
pH	•	Units	6.35	1	0.01 2	0.01 5	SM 4500H+ SM 2320E
Alkalinity as CaCO3 Hydroxide Alkalinity	Γ	ng/l "	4 ND	J	2	5	SIVI 2320E
Tryuroniue Aikalii lity			טאו		۷	ວ	

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521 Attention: CHRIS CURRENS

The state of the s

Project: NPS - BASELINE WATER QUALITY INVENTORY

General Chemistry

Analyte		Unit	s Results	Qualifier	MDL	RL	Method
CRUMBAUGH LAKE	Water	(5070902-09)	Sampled:07/27/05 11	:00 Receiv	ed:07/27/05 13	3:43	
Bicarbonate		п	5		2	5	"
Carbonate		п	ND		2	5	II .
Specific Conductance		umhos/o	cm 34		2	10	SM 2510B
CRUMBAUGH LAKE	Water	(5070902-10)	Sampled:07/27/05 11	:00 Receiv	ed:07/27/05 13	3:43	
Alkalinity as CaCO3		mg/l	4	J	2	5	SM 2320E
Hydroxide Alkalinity		ш	ND		2	5	II .
Bicarbonate		п	5		2	5	II .
Carbonate		п	ND		2	5	II .
TERRACE LAKE W	ater (50	070902-11) Sa	mpled:07/27/05 12:30	Received:0	7/27/05 13:43		
Alkalinity as CaCO3		mg/l	ND		2	5	SM 2320B
Hydroxide Alkalinity		п	ND		2	5	"
Bicarbonate		ш	ND		2	5	"
Carbonate		п	ND		2	5	II .
TERRACE LAKE W	ater (50	070902-12) Sa	mpled:07/27/05 12:30	Received:0	7/27/05 13:43		
pН		pH Uni	ts 5.88		0.01	0.01	SM 4500H+
Alkalinity as CaCO3		mg/l	ND		2	5	SM 2320B
Hydroxide Alkalinity		ш	ND		2	5	· ·
Bicarbonate		ш	ND		2	5	· ·
Carbonate		ш	ND		2	5	· ·
Specific Conductance		umhos/o	cm ND		2	10	SM 2510B
TERRACE LAKE W	ater (50	070902-13) Sa	mpled:07/27/05 12:30	Received:0	7/27/05 13:43		
Alkalinity as CaCO3		mg/l	ND		2	5	SM 2320B
Hydroxide Alkalinity		u u	ND		2	5	"
Bicarbonate		u u	ND		2	5	"
Carbonate		II .	ND		2	5	

Basic Laboratory, Inc.

California D.O.H.S. Cert #1677

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521

Attention: CHRIS CURRENS

Project: NPS - BASELINE WATER QUALITY INVENTORY

Microbiology

Analyte	Units	Results	Qualifier	MDL	RL	Method
EMERALD LAKE Water	(5070902-01) Sampled:07	/27/05 08:30	Received:07/	27/05 13:43		
Total Coliforms Fecal Coliforms	MPN/100 ml "	5 <2			2 2	SM 9221B/E
EMERALD LAKE Water	(5070902-02) Sampled:07	/27/05 08:30	Received:07/	27/05 13:43		
Total Coliforms Fecal Coliforms EMERALD LAKE Water	MPN/100 ml " (5070902-03) Sampled:07.	8 <2 /27/05 08:30	Received:07/	27/05 13:43	2 2	SM 9221B/E
Total Coliforms Fecal Coliforms LAKE HELEN Water (5	MPN/100 ml " 5070902-04) Sampled:07/27	5 <2 7/05 09:00 R	eceived:07/27	/05 13:43	2 2	SM 9221B/E
Total Coliforms Fecal Coliforms LAKE HELEN Water (5	MPN/100 ml " 5070902-05) Sampled:07/27	7 <2 7/05 09:00 R	eceived:07/27	/05 13:43	2 2	SM 9221B/E "
Total Coliforms Fecal Coliforms LAKE HELEN Water (5	MPN/100 ml " 5070902-06) Sampled:07/27	2 <2 7/05 09:00 R	eceived:07/27	/05 13:43	2 2	SM 9221B/E "
Total Coliforms Fecal Coliforms CRUMBAUGH LAKE Wat	MPN/100 ml " ter (5070902-08) Sampled	<2 <2 : 07/27/05 11 :	:00 Received:	07/27/05 13:4	2 2 13	SM 9221B/E "
Total Coliforms	MPN/100 ml	2			2	SM 9221B/E

Fecal Coliforms CRUMBAUGH LAKE Water (50)	" 070902-09) Sampled:0	<2 07/27/05 11:00 Received:07/27/05 13:	2 2 43	п
Total Coliforms Fecal Coliforms CRUMBAUGH LAKE Water (50)	MPN/100 ml " 070902-10) Sampled:0	<2 <2 07/27/05 11:00 Received:07/27/05 13:	2 2 2	SM 9221B/E "
Total Coliforms Fecal Coliforms TERRACE LAKE Water (50709	MPN/100 ml " 02-11) Sampled:07/2	8 <2 7/05 12:30 Received:07/27/05 13:43	2 2	SM 9221B/E "
Total Coliforms Fecal Coliforms TERRACE LAKE Water (50709	MPN/100 ml " 02-12) Sampled:07/2	4 <2 7/05 12:30 Received:07/27/05 13:43	2 2	SM 9221B/E "
Total Coliforms Fecal Coliforms TERRACE LAKE Water (50709	MPN/100 ml " 02-13) Sampled:07/2	4 <2 7/05 12:30 Received:07/27/05 13:43	2 2	SM 9221B/E "
Total Coliforms Fecal Coliforms	MPN/100 ml	5 <2	2 2	SM 9221B/E

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521 Attention: CHRIS CURRENS

Project: NPS - BASELINE WATER QUALITY INVENTORY

Quality Control Data

Analyte		Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits		
			(General	Chemistr	-y				
Batch B5G0563 - General Prep - GC										
LCS pH		7.05		pH 	7.00		101	80-120		
pH Batch B5G0580 - Gene	Source: 5070902-02	7.04	0.01	pH Unite		6.70				
Blank	riai Fiep - GC									
Specific Conductance		ND	10	umhos/						

LCS								
Specific Conductance		107		umhos/	100		107	80-120
Duplicate	Source: 5070902-02							
Specific Conductance		10.0	10	umhos/		10		
Batch B5G0597 - Gene	eral Prep - GC			cm				
Blank								
Alkalinity as CaCO3		ND	5	mg/l				
Hydroxide Alkalinity		ND	5	mg/l				
Bicarbonate		ND	5	mg/l				
Carbonate		ND	5	mg/l				
LCS								
Alkalinity as CaCO3		0.05		mg/l	0.0500		100	80-120
Duplicate	Source: 5070902-01							
Alkalinity as CaCO3		6.0	5	mg/l		6		
Duplicate	Source: 5070825-01							
Alkalinity as CaCO3		656	20	mg/l		660		
Batch B5G0638 - Gene	eral Prep - GC							
Blank								
Alkalinity as CaCO3		ND	5	mg/l				
Hydroxide Alkalinity		ND	5	mg/l				
Bicarbonate		ND	5	mg/l				
Carbonate		ND	5	mg/l				
LCS								
Alkalinity as CaCO3		0.05		mg/l	0.0500		100	80-120
Duplicate	Source: 5070902-11							
Alkalinity as CaCO3		ND	5	mg/l		ND		
Duplicate	Source: 5070955-03							
Alkalinity as CaCO3		ND	5	mg/l		ND		

Α

dry

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521 Attention: CHRIS CURRENS

Sample results reported on a dry weight basis

Project: NPS - BASELINE WATER QUALITY INVENTORY

Notes and Definitions

J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag). The J flag is equivalent to the DNQ Estin
A-01	<2
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the detection limit
NR	Not Reported

RPD Relative Percent Difference
< Less than reporting limit

 \leq Less than or equal to reporting limit

> Greater than reporting limit

≥ Greater than or equal to reporting limit

MDL Method Detection Limit

RL/ML Minimum Level of Quantitation

MCL/AL Maxium Contaminant Level/Action Level

 mg/kg
 Results reported as wet weight

 TTLC
 Total Threshold Limit Concentration

 STLC
 Soluble Threshold Limit Concentration

 TCLP
 Toxicity Characteristic Leachate Procedure

Approved By Basic Laboratory, Inc. California D.O.H.S. Cert #1677 Lab No: 5070902 Reported: 08/04/05

Phone: (707) 825-5189

	Analyzed	Prepared	Batch	
	07/28/05	07/28/05	B5G0597	
	· ·	п	п	
	"	"	11	
	07/27/05 07/28/05	07/27/05 07/28/05	B5G0563 B5G0597	
	"	u		
	"	"	"	
	07/28/05	07/28/05	B5G0580	
	07/28/05	07/28/05	B5G0597	
	"		"	
	"	"	"	
3	"	07/28/05	07/28/05	B5G0597
				"
	"	"	"	
3	07/27/05	07/27/05 07/28/05	B5G0563 07/28/05	B5G0597
,	"	"	"	D300371
	"	"	"	II .
	07/28/05	07/28/05	B5G0580	
3		07/28/05	07/28/05	B5G0597
	"	"	"	
	"	n n	· ·	
,	07/27/05	07/27/05	B5G0563	DECOEOZ
3		07/28/05	07/28/05	B5G0597
		"	"	"
	07/20/05	07/20/05	"	
	07/28/05	07/28/05	B5G0580	
3		07/28/05	07/28/05	B5G0597
	"	"	· ·	
	"			
	07/27/05	07/27/05	B5G0563	
3		07/28/05	07/28/05	B5G0597
	"	"		

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Lab No: 5070902 **Reported:** 08/04/05

Phone: (707) 825-5189

	Analyzed	Prepared	Batch	
	n n	07/28/05		
	07/28/05	07/28/05	B5G0580	
3		07/28/05	07/28/05	B5G0597
	"	"	"	
	"	"	"	
	"	"	"	
	07/30/05	07/30/05	B5G0638	
	"	"	11	
	"	"	"	
	"	"	"	
	07/27/05	07/27/05	B5G0563	
	07/30/05	07/30/05	B5G0638	
	"	"	n n	
	· ·	II .	II .	
	"	"	II .	
	07/28/05	07/28/05	B5G0580	
	07/30/05	07/30/05	B5G0638	
	"	"	11	
	"	"	"	

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 Lab No:
 5070902

 Reported:
 08/04/05

Phone: (707) 825-5189

Analyzed	Prepared	Batch
07/31/05	07/27/05	B5H0019
07/31/05	07/27/05	B5H0019
07/31/05	07/27/05	B5H0019 "
07/31/05	07/27/05	B5H0019

Page 4 of 6

Lab No: 5070902

Reported: 08/04/05

Phone: (707) 825-5189

P.O. #

RPD RPD Qualifier

4.95 20

0.00 20

0.00 20

0.608 20

20

20

Page 5 of 6

 Lab No:
 5070902

 Reported:
 08/04/05

Phone: (707) 825-5189

P.O. #

nated Concentration flag.

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521 Attention: CHRIS CURRENS

Project: NPS - BASELINE WATER QUALITY INVENTORY

General Chemistry

Mikalinity as CacCo	Analyte	Units	Results Qu	ualifier MD	L RL	Method
Potention Pot	SHADOW LAKE 1 Water	(5070955-01) S	ampled:07/27/05 15:00	Received:07/28/05	13:20	
Signification Parameter	Alkalinity as CaCO3	mg/l	2	J	2	5 SM 2320
SHADOW LAKE 2 "FILE "FILE	•	п				
PH		"				5 "
Ph		(E0700EE 02) C				
Mydroxide Alkalinity			-			
Pigen and Piles Pigen Pi	•	•				
Final Properties	-	mg/I				5 SIVI 2320
Specific Conductance	•	п				5 "
Specific Conductance		n n				"
Alkalinity CaCO3	Specific Conductance	umhos/cn	n ND			SM 2510B
Hydroxide Alkalinity Figure Fi	SHADOW LAKE 3 Water	(5070955-03) S	ampled:07/27/05 15:00	Received:07/28/05	13:20	
Hydroxide Hidlinity High Hig	Alkalinity as CaCO3	mg/l	ND	2	5	SM 2320B
No	-	"	ND	2	5	u
CLIFF Variable Surgest Surg	Bicarbonate	п	ND	2	5	п
Alkalinity as CaCO Single	Carbonate	II .		2	5	п
Flydroxide Halinity H	CLIFF 1 Water (507095	55-04) Sampled:0	07/27/05 16:00 Receive	ed:07/28/05 13:20		
Note	Alkalinity as CaCO3	mg/l	38	2	5	SM 2320B
State Sta	Hydroxide Alkalinity	п	ND			II .
Ph		"				"
PH		"			5	"
Alkalinity as CaCO3 Hydroxide Alkalinity Pacific Conductation Pacific Co	CLIFF 2 Water (50709)	55-05) Sampled:0	07/27/05 16:00 Receive	ed:07/28/05 13:20		
Hydroxide Alkalinity " ND	-	•				
Signar	<u> </u>					
Carbonate	,					
Specific Conductance		п				п
CLIFF 3		umhos/cn				SM 2510B
Hydroxide Alkalinity " ND 2 5 " 1 Bicarbonate " ND 2 5 " 1 Carbonate " ND 2 5 " 1 SIFFORD MAIN 1 Water (5070955-07) Sampled:07/28/05 10:00 Received:07/28/05 13:20 *** *** *** *** *** *** *** *** *** **	•					
Hydroxide Alkalinity " ND 2 5 " 1 Bicarbonate " ND 2 5 " 1 Carbonate " ND 2 5 " 1 SIFFORD MAIN 1 Water (5070955-07) Sampled:07/28/05 10:00 Received:07/28/05 13:20 *** *** *** *** *** *** *** *** *** **	Alkalinity as CaCO3	•		2	5	SM 2320B
48 2 5 Carbonate "ND 2 5 " SIFFORD MAIN 1 Water (5070955-07) Sampled:07/28/05 10:00 Received:07/28/05 13:20 Alkalinity as CaCO3 mg/l ND 2 5 SM 2320B Hydroxide Alkalinity "ND 2 5 " Bicarbonate "ND 2 5 " Carbonate "ND 2 5 " SIFFORD MAIN 2 Water (5070955-08) Sampled:07/28/05 10:00 Received:07/28/05 13:20 pH pH pH Units 6.04 0.01 0.01 SM 4500H+ Alkalinity as CaCO3 mg/l ND 2 5 SM 2320B Hydroxide Alkalinity "ND 2 5 SM 2320B Hydroxide Alkalinity "ND 2 5 " Bicarbonate "ND 2 5 " Carbonate "ND 2 5 " Carbonate <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td>	-					
SIFFORD MAIN 1 Water (5070955-07) Sampled:07/28/05 10:00 Received:07/28/05 13:20 Alkalinity as CaCO3 mg/l ND 2 5 SM 2320B Hydroxide Alkalinity ND 2 5 " Bicarbonate ND 2 5 " Carbonate ND 2 5 " SIFFORD MAIN 2 Water (5070955-08) Sampled:07/28/05 10:00 Received:07/28/05 13:20 * pH pH Units 6.04 0.01 0.01 SM 4500H+ Alkalinity as CaCO3 mg/l ND 2 5 SM 2320B Hydroxide Alkalinity ND 2 5 SM 2320B Hydroxide Alkalinity ND 2 5 SM 2320B Bicarbonate ND 2 5 " Carbonate ND 2 5 " Specific Conductance umhos/m ND 2 5 "	Bicarbonate	II .	48	2	5	п
Alkalinity as CaCO3 mg/l ND 2 5 SM 2320B Hydroxide Alkalinity " ND 2 5 " Bicarbonate " ND 2 5 " Carbonate " ND 2 5 " SIFFORD MAIN 2 Water (5070955-08) Sampled:07/28/05 10:00 Received:07/28/05 13:20 *** pH pH Units 6.04 0.01 0.01 SM 4500H+ Alkalinity as CaCO3 mg/l ND 2 5 SM 2320B Hydroxide Alkalinity " ND 2 5 SM 2320B Hydroxide Alkalinity " ND 2 5 " Bicarbonate " ND 2 5 " Carbonate " ND 2 5 " Specific Conductance umhos/cm ND 2 10 SM 2510B	Carbonate	п			5	п
Hydroxide Alkalinity " ND 2 5 " Carbonate Bicarbonate " ND 2 5 " Carbonate SIFFORD MAIN 2 Water (5070955-08) Sampled:07/28/05 10:00 Received:07/28/05 13:20 SM 4500H+ PH PH Units 6.04 0.01 0.01 SM 4500H+ Alkalinity as CaCO3 " ND 2 5 SM 2320B Hydroxide Alkalinity " ND 2 5 " Carbonate Bicarbonate " ND 2 5 " Carbonate Carbonate " ND 2 5 " Carbonate Specific Conductance " Umbob/cm" ND 2 5 " Carbonate " Carbonat	SIFFORD MAIN 1 Water	(5070955-07) S	Sampled:07/28/05 10:00	Received:07/28/0	5 13:20	
Signationate " ND 2 5 " ND 2 5 " ND 2 5 5 " ND 2 5 5 " ND 2 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	Alkalinity as CaCO3	mg/l	ND	2	5	SM 2320B
Carbonate " ND 2 5 " SIFFORD MAIN 2 Water (5070955-08) Sampled:07/28/05 10:00 Received:07/28/05 13:20 pH PH PH PH 0.01 0.01 SM 4500H+ Alkalinity as CaCO3 mg/l ND 2 5 SM 2320B Hydroxide Alkalinity ND 2 5 " Bicarbonate " ND 2 5 " Carbonate ND 2 5 " Specific Conductance umhos/cm ND 2 10 SM 2510B	Hydroxide Alkalinity	II .				п
SIFFORD MAIN 2 Water (5070955-08) Sampled:07/28/05 10:00 Received:07/28/05 13:20 pH pH Units 6.04 0.01 0.01 SM 4500H+ Alkalinity as CaCO3 mg/l ND 2 5 SM 2320B Hydroxide Alkalinity " ND 2 5 " Bicarbonate " ND 2 5 " Carbonate ND 2 5 " Specific Conductance umhos/cm ND 2 10 SM 2510B		"				"
pH pH Units 6.04 0.01 0.01 SM 4500H+ Alkalinity as CaCO3 mg/l ND 2 5 SM 2320B Hydroxide Alkalinity " ND 2 5 " Bicarbonate " ND 2 5 " Carbonate " ND 2 5 " Specific Conductance umhos/cm ND 2 10 SM 2510B		(E0700EE 00) C				-
Alkalinity as CaCO3 mg/l ND 2 5 SM 2320B Hydroxide Alkalinity " ND 2 5 " Bicarbonate " ND 2 5 " Carbonate " ND 2 5 " Specific Conductance umhos/cm ND 2 10 SM 2510B		` ,	•			
Hydroxide Alkalinity " ND 2 5 " Bicarbonate " ND 2 5 " Carbonate " ND 2 5 " Specific Conductance umhos/cm ND 2 10 SM 2510B						
Bicarbonate " ND 2 5 " Carbonate " ND 2 5 " Specific Conductance umhos/cm ND 2 10 SM 2510B	-	mg/I				SIVI 232UB
Carbonate " ND 2 5 " Specific Conductance umhos/cm ND 2 10 SM 2510B	,	п				п
Specific Conductance umhos/cm ND 2 10 SM 2510B		· ·				п
SIFFORD MAIN 3 Water (5070955-09) Sampled:07/28/05 10:00 Received:07/28/05 13:20		umhos/cn				SM 2510B
	SIFFORD MAIN 3 Water	(5070955-09) S	Sampled:07/28/05 10:00	Received:07/28/0	5 13:20	
Alkalinity as CaCO3 mg/l ND 2 5 SM 2320B	Alkalinity as CaCO3	mg/l	ND	2	5	SM 2320B
Hydroxide Alkalinity " ND 2 5 "	•	"				u
Bicarbonate " ND 2 5 "	Bicarbonate	· ·	ND	2	5	11

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521 Attention: CHRIS CURRENS

Project: NPS - BASELINE WATER QUALITY INVENTORY

General Chemistry

Analyte	Units	Results	Qualifier	MDL	RL	Method
SIFFORD MAIN 3 Water	er (5070955-09) Sam	pled:07/28/05 10:0	00 Received:0	7/28/05 13:20)	
Carbonate	п	ND		2	5	п
SIFFORD #2 1 Water	(5070955-10) Sample	d:07/28/05 10:00	Received:07/2	28/05 13:20		
Alkalinity as CaCO3	mg/l	2	J	2		5 SM 2320
Hydroxide Alkalinity	п	ND		2	5	п
Bicarbonate	u u	2	J	2		5 "
Carbonate	п	ND		2	5	п
SIFFORD #2 2 Water	(5070955-11) Sample	d:07/28/05 10:00	Received:07/2	28/05 13:20		
pН	pH Units	6.11		0.01	0.01	SM 4500H+
Alkalinity as CaCO3	mg/l	2	J	2		5 SM 2320
Hydroxide Alkalinity	n n	ND		2	5	п
Bicarbonate	II .	2	J	2		5 "
Carbonate	п	ND		2	5	п
Specific Conductance	umhos/cm	ND		2	10	SM 2510B
SIFFORD #2 3 Water	(5070955-12) Sample	d:07/28/05 10:00	Received:07/2	28/05 13:20		
Alkalinity as CaCO3	mg/l	3	J	2		5 SM 2320
Hydroxide Alkalinity	ıı .	ND		2	5	II.
Bicarbonate	· ·	3	J	2		5 "
Carbonate	u	ND		2	5	n .

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521 Attention: CHRIS CURRENS

Project: NPS - BASELINE WATER QUALITY INVENTORY

Quality Control Data

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits
			Gene	eral Chemis	stry		
Batch B5G0601 - Gener	al Prep - GC						
LCS							
рН	7.06		pH Unit	s 7.00		101	80-120
Duplicate	Source: 5070955-02						
рН	6.36	0.01	pH Unit	S	6.38		
Batch B5G0638 - Gener	al Prep - GC						
Blank							
Alkalinity as CaCO3	ND	5	mg/l				
Hydroxide Alkalinity	ND	5	mg/l				

	ND	5	mg/l				
	ND	5	mg/l				
	0.05		mg/l	0.0500		100	80-120
Source: 5070902-11							
	ND	5	mg/l		ND		
Source: 5070955-03							
	ND	5	mg/l		ND		
al Prep - GC							
	ND	10	umhos/cm				
	105		umhos/cm	100		105	80-120
Source: 5070955-02							
Source: 5070955-02	ND	10	umhos/cm		ND		
Source: 5070955-02 Source: 5080153-02	ND	10	umhos/cm		ND		
	Source: 5070902-11 Source: 5070955-03 al Prep - GC	0.05 Source: 5070902-11 ND Source: 5070955-03 ND al Prep - GC	0.05 Source: 5070902-11 ND 5 Source: 5070955-03 ND 5 al Prep - GC	0.05 mg/l Source: 5070902-11 ND 5 mg/l Source: 5070955-03 ND 5 mg/l al Prep - GC ND 10 umhos/cm	0.05 mg/l 0.0500 Source: 5070902-11 ND 5 mg/l Source: 5070955-03 ND 5 mg/l al Prep - GC	0.05 mg/l 0.0500 Source: 5070902-11 ND 5 mg/l ND Source: 5070955-03 ND 5 mg/l ND al Prep - GC	0.05 mg/l 0.0500 100 Source: 5070902-11 ND 5 mg/l ND Source: 5070955-03 ND 5 mg/l ND al Prep - GC

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521 Attention: CHRIS CURRENS

Project: NPS - BASELINE WATER QUALITY INVENTORY

Notes and Definitions

	Notes and Definitions
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag). The J flag is equivalent to the DNQ Estimated concentration (CLP J-Flag).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the detection limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
<	Less than reporting limit
<u><</u>	Less than or equal to reporting limit

> Greater than reporting limit

 \geq Greater than or equal to reporting limit

MDL Method Detection Limit

RL/ML Minimum Level of Quantitation

MCL/AL Maxium Contaminant Level/Action Level

mg/kg Results reported as wet weight
TTLC Total Threshold Limit Concentration
STLC Soluble Threshold Limit Concentration
TCLP Toxicity Characteristic Leachate Procedure

Approved By
Basic Laboratory, Inc.
California D.O.H.S. Cert #1677

Lab No: 5070955 **Reported:** 08/10/05

Phone: (707) 825-5189

,	Analyzed	Prepared	Batch	
В		07/30/05	07/30/05	B5G0638
	"			
_	07/28/05	07/28/05	B5G0601	DE 00 / 00
В		07/30/05	07/30/05	B5G0638
		п		
	"			
	08/04/05	08/04/05	B5H0142	
	07/30/05	07/30/05	B5G0638	
	"	"	"	
	"	п	п	
	"	п	"	
	07/30/05	07/30/05	B5G0638	
	"	п	п	
	"	n n	"	
	"	п	"	
	07/28/05	07/28/05	B5G0601	
	07/30/05	07/30/05	B5G0638	
	"	"	"	
	"		"	
	08/04/05	08/04/05	B5H0142	
	06/04/03	06/04/03	D3H0142	
	07/30/05	07/30/05	B5G0638	
		п		
	07/20/05	07/20/05	DECO(20	
	07/30/05	07/30/05	B5G0638	
	"	п	n n	
	"	n n		
	07/28/05	07/28/05	B5G0601	
	07/30/05	07/30/05	B5G0638	
	"	n .		
	"	u u	"	
	"	u u	"	
	08/04/05	08/04/05	B5H0142	
	07/30/05	07/30/05	B5G0638	
	"	п	"	
	II .			

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Lab No: 5070955 **Reported:** 08/10/05

Phone: (707) 825-5189

Analyzed	Prepared	Batch	
п	07/30/05	п	
В	07/30/05	07/30/05	B5G0638
п		11	"
07/28/05 B	07/28/05 07/30/05	B5G0601 07/30/05	B5G0638
	n n	n n n	"
08/04/05	08/04/05	B5H0142	
В "	07/30/05	07/30/05	B5G0638
"	" "	"	"

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Lab No: 5070955 **Reported:** 08/10/05

Phone: (707) 825-5189

P.O. #

RPD

RPD Limit Qualifier

0.314 20

20

20

20

0.00 20

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Lab No: 5070955 **Reported:** 08/10/05

Phone: (707) 825-5189

P.O. #

ated Concentration flag.

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521 Attention: CHRIS CURRENS

Project: NPS - BASELINE WATER QUALITY INVENTORY LASSEN VNP

General Chemistry

Analyte	Units	Results	Qualifier	MDL	RL	Method
MANZANITA CREEK 1 Surface	e Water (5060)	298-01) San	npled:06/06/05 16	:00 Rece	ived:06/0	07/05 16:00
рН	pH Units	7.56	1-03	0.0	1 0.	01
Alkalinity as CaCO3	mg/l	50		2	5	SM 2320B
Bicarbonate	"	61 ND		2	5	"
Carbonate	Mator (E040)	ND 298-02) San	nlod:04 /04 /0E 14	2 •00 Poss	5 ivad:04 //	07/0E 14:00
MANZANITA CREEK 2 Surface	•	•	npled:06/06/05 16			07/05 16:00
pH Alkalinity as CaCO3	pH Units mg/l	7.63 50	1-03	0.0	1 0. 5	01 SM 2320B
Bicarbonate	"	61		2	5	3W 2320D
Carbonate	· ·	ND		2	5	"
MANZANITA CREEK 3 Surface	e Water (5060)	298-03) San	npled:06/06/05 16	:00 Rece	ived:06/0	07/05 16:00
рН	pH Units	7.65	1-03	0.0	1 0.	01
Alkalinity as CaCO3	mg/l	51		2	5	SM 2320B
Bicarbonate	"	62 ND		2 2	5 5	"
Carbonate MANZANITA LAKE 1 Surface '	Water (506029		oled:06/06/05 16:3			//05 16:00
	•		neu.00/00/05 10.3			
pH Alkalinity as CaCO3	pH Units mg/l	8.51 48		0.01 2	0.01 5	SM 4500H+ SM 2320B
Bicarbonate	mg/i	56		2	5	JIVI 2320D
Carbonate	п	ND		2	5	п
MANZANITA LAKE 2 Surface	Water (506029	98-05) Samp	oled:06/06/05 16:3	30 Receiv	ed:06/07	//05 16:00
рН	pH Units	8.60		0.01	0.01	SM 4500H+
Alkalinity as CaCO3	mg/l	48		2	5	SM 2320B
Bicarbonate Carbonate	"	57 ND		2 2	5 5	
MANZANITA LAKE 3 Surface	Water (506029		oled:06/06/05 16:3			//05 16:00
	•		nca.00/00/03 10.c			
pH Alkalinity as CaCO3	pH Units mg/l	8.52 48		0.01 2	0.01 5	SM 4500H+ SM 2320B
Bicarbonate	"	59		2	5	"
Carbonate	· ·	ND		2	5	"
HAT CREEK 1 Surface Water	(5060298-07)	Sampled:06	/06/05 18:00 Re	ceived:06/	07/05 16	5:00
рН	pH Units	7.95		0.01	0.01	SM 4500H+
Alkalinity as CaCO3	mg/l "	31		2	5	SM 2320B
Bicarbonate Carbonate		38 ND		2 2	5 5	
HAT CREEK 2 Surface Water	(5060298-08)		/06/05 18:00 Re	ceived:06/		5:00
pH	pH Units	8.06		0.01	0.01	SM 4500H+
Alkalinity as CaCO3	mg/l	31		2	5	SM 2320B
Bicarbonate	"	38		2	5	"
Carbonate		ND		2	5	"
HAT CREEK 3 Surface Water	(5060298-09)	Sampled:06	/06/05 18:00 Re	ceived:06/	07/05 16	5:00
pH	pH Units	7.51		0.01	0.01	SM 4500H+
Alkalinity as CaCO3 Bicarbonate	mg/l "	31 38		2 2	5 5	SM 2320B
Carbonate	n n	ND		2	5	
SNAG LAKE 1 Surface Water	(5060298-10)		/07/05 11:30 Re	ceived:06/		5:00
pН	pH Units	7.78		0.01	0.01	SM 4500H+
Alkalinity as CaCO3	mg/l	18		2	5	SM 2320B
Bicarbonate	"	22		2	5	"
Carbonate	u.	ND		2	5	··

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521 Attention: CHRIS CURRENS

Project: NPS - BASELINE WATER QUALITY INVENTORY LASSEN VNP

General Chemistry

Analyte	Units	Results	Qualifier	MDL	RL	Method
SNAG LAKE 2 Surface Water	(5060298-11)	Sampled:06/	07/05 11:30	Received:06	/07/05 16	5:00
pH	pH Units	7.89		0.01	0.01	SM 4500H+
Alkalinity as CaCO3	mg/l	18		2	5	SM 2320B
Bicarbonate	п	22		2	5	"
Carbonate	··	ND		2	5	"
SNAG LAKE 3 Surface Water	(5060298-12)	Sampled:06/	07/05 11:30	Received:06	/07/05 1 <i>6</i>	5:00
pH	pH Units	7.90		0.01	0.01	SM 4500H+
Alkalinity as CaCO3	mg/l	18		2	5	SM 2320B
Bicarbonate	u u	21		2	5	"
Carbonate	п	ND		2	5	"
BUTTE LAKE 1 Surface Water	(5060298-13)	Sampled:06	/07/05 13:00	Received:06	/07/05 1	6:00
pH	pH Units	7.98		0.01	0.01	SM 4500H+
Alkalinity as CaCO3	mg/l	26		2	5	SM 2320B
Bicarbonate	u u	32		2	5	"
Carbonate	п	ND		2	5	"
BUTTE LAKE 2 Surface Water	(5060298-14)	Sampled:06/07/05 14:00		Received:06/07/05 16:00		
pH	pH Units	8.28		0.01	0.01	SM 4500H+
Alkalinity as CaCO3	mg/l	26		2	5	SM 2320B
Bicarbonate	· ·	32		2	5	"
Carbonate	u u	ND		2	5	"
BUTTE LAKE 3 Surface Water	(5060298-15)	Sampled:06	/07/05 14:00	Received:06	/07/05 1	6:00
рН	pH Units	8.02		0.01	0.01	SM 4500H+
Alkalinity as CaCO3	mg/l	26		2	5	SM 2320B
Bicarbonate	u u	32		2	5	"
Carbonate	u u	ND		2	5	"

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521 Attention: CHRIS CURRENS

Project: NPS - BASELINE WATER QUALITY INVENTORY LASSEN VNP

Microbiology

Analyte		Units	Results	Qualifier	MDL	RL	Method
SNAG LAKE 1	Surface Water	(5060298-10)	Sampled:06	/07/05 11:30	Received:06/	07/05 16	5:00
Total Coliforms		MPN/100 ml	17			2	SM 9221B/E
Fecal Coliforms		n .	13			2	
SNAG LAKE 2	Surface Water	(5060298-11)	Sampled:06	/07/05 11:30	Received:06/	07/05 16	5:00
Total Coliforms		MPN/100 ml	33			2	SM 9221B/E
Fecal Coliforms		п	11			2	
SNAG LAKE 3	Surface Water	(5060298-12)	Sampled:06	/07/05 11:30	Received:06/	07/05 16	5:00
Total Coliforms		MPN/100 ml	33			2	SM 9221B/E
Fecal Coliforms		п	8			2	II .
BUTTE LAKE 1	Surface Water	(5060298-13)	Sampled:06	0/07/05 13:00	Received:06/	/ 07/05 1	6:00
Total Coliforms		MPN/100 ml	8			2	SM 9221B/E
Fecal Coliforms		п	<2			2	II .
BUTTE LAKE 2	Surface Water	(5060298-14)	Sampled:06	0/07/05 14:00	Received:06/	/ 07/05 1	6:00
Total Coliforms		MPN/100 ml	33			2	SM 9221B/E
Fecal Coliforms		п	5			2	
BUTTE LAKE 3	Surface Water	(5060298-15)	Sampled:06	0/07/05 14:00	Received:06/	/ 07/05 1	6:00
Total Coliforms		MPN/100 ml	13			2	SM 9221B/E
Fecal Coliforms		II .	<2			2	"

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521 Attention: CHRIS CURRENS

Project: NPS - BASELINE WATER QUALITY INVENTORY LASSEN VNP

Quality Control Data

Analyte	Result	RL	Units	Spike Level			%REC Limits	
			G	eneral Ch	nemistry			
Batch B5F0147 - General Prep - GC								
LCS								
рН	7.04		pH Unit	s 7.00		101	80-120	
Duplicate	Source: 5060298-11							
pH	7.83	0.01	pH Unit	S	7.89			
Batch B5F0148 - Ger	Batch B5F0148 - General Prep - GC							
LCS								
рН	7.04		pH Unit	s 7.00		101	80-120	

Duplicate	Source: 5060253-01								
рН	8.89	0.01	pH Units		8.87				
Duplicate	Source: 5060298-04								
рН	8.47	0.01	pH Units		8.51				
Batch B5F0237 - General Prep - GC									
Blank									
Alkalinity as CaCO3	ND	5	mg/l						
Bicarbonate	ND	5	mg/l						
Carbonate	ND	5	mg/l						
LCS									
Alkalinity as CaCO3	0.05		mg/l	0.0500		100	80-120		
Duplicate	Source: 5060298-01								
Alkalinity as CaCO3	50.0	5	mg/l		50				
Duplicate	Source: 5060298-11								
Alkalinity as CaCO3	18.0	5	mg/l		18				

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521

Attention: CHRIS CURRENS

Project: NPS - BASELINE WATER QUALITY INVENTORY LASSEN VNP

Notes and Definitions

I-03	Sample was received past the EPA recommended holding time.
A-01	<2
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the detection limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
<	Less than reporting limit

 \leq Less than or equal to reporting limit

> Greater than reporting limit

 \geq Greater than or equal to reporting limit

MDL Method Detection Limit

RL/ML Minimum Level of Quantitation

MCL/AL Maxium Contaminant Level/Action Level

mg/kg Results reported as wet weight
TTLC Total Threshold Limit Concentration
STLC Soluble Threshold Limit Concentration
TCLP Toxicity Characteristic Leachate Procedure

Approved By Basic Laboratory, Inc. California D.O.H.S. Cert #1677 Lab No: 5060298

Reported: 06/15/05

Phone: (707) 825-5189

Analyzed	Prepared	Batch	
SM 4500H+	06/07/05	06/07/05	B5F0148
06/11/05	06/11/05	B5F0237	
п	п		
SM 4500H+	06/07/05	06/07/05	B5F0148
06/11/05	06/11/05	B5F0237	
n.	n.	11	
SM 4500H+	06/07/05	06/07/05	B5F0148
06/11/05	06/11/05	B5F0237	D3FU140
"	"	"	
06/07/05	06/07/05	B5F0148	
06/11/05	06/11/05	B5F0237	
и	"	"	
06/07/05 06/11/05	06/07/05 06/11/05	B5F0148 B5F0237	
п	u	"	
н	"	п	
06/07/05	06/07/05	B5F0148	
06/11/05	06/11/05	B5F0237	
"		"	
06/07/05	06/07/05	B5F0148	
06/11/05	06/11/05	B5F0237	
п	· ·	II.	
06/07/05	06/07/05	B5F0148	
06/11/05	06/11/05	B5F0237	
"	"	"	
06/07/05	06/07/05	B5F0148	
06/11/05	06/11/05	B5F0237	
и	н	п	
06/07/05 06/11/05	06/07/05 06/11/05	B5F0148 B5F0237	
п	"	u u	

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 Lab No:
 5060298

 Reported:
 06/15/05

Phone: (707) 825-5189

Analyzed	Prepared	Batch
06/07/05 06/11/05 "	06/07/05 06/11/05 "	B5F0147 B5F0237

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Lab No: 5060298 **Reported:** 06/15/05

Phone: (707) 825-5189

Analyzed	Prepared	Batch
06/11/05	06/07/05	B5F0259

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Lab No: 5060298 **Reported:** 06/15/05

Phone: (707) 825-5189

P.O. #

RPD

RPD Limit Qualifier

0.763 20

0.225 20

0.471 20

0.00 20

0.00 20

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Lab No: 5060298 **Reported:** 06/15/05

Phone: (707) 825-5189

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521 Attention: CHRIS CURRENS

Project: NPS - BASELINE WATER QUALITY INVENTORY LASSEN VNP

General Chemistry

Analyte	Units	Results C	Qualifier	MDL	RL	Method
MILL CREEK 1 Water	(5060378-01) Sample	ed:06/08/05 09:30	Received:06	/09/05 11	:50	
рН	pH Units	6.76	1-03		0.01 0.01	SM 4500H
Alkalinity as CaCO3	mg/l	11		2	5	SM 2320B
Bicarbonate	"	13		2	5	
Carbonate	(FO(0070 00) CI	ND	Described 6	2	5	
MILL CREEK 2 Water	-	ed:06/08/05 09:30	Received:06	709705 11		
pH	pH Units	6.83	1-03	2	0.01 0.01	SM 4500H
Alkalinity as CaCO3 Bicarbonate	mg/l	11 13		2 2	5 5	SM 2320B
Carbonate	п	ND		2	5	n .
MILL CREEK 3 Water	(5060378-03) Sample	ed:06/08/05 09:30	Received:06			
pН	pH Units	6.87	1-03		0.01 0.01	SM 4500H
Alkalinity as CaCO3	mg/l	11		2	5	SM 2320B
Bicarbonate	п	13		2	5	II .
Carbonate		ND		2	5	u u
KINGS CREEK 1 Water	(5060378-04) Samp	oled:06/08/05 09:00	O Received:	06/09/05 1	11:50	
рН	pH Units	6.97	I-03		0.01 0.01	SM 4500H
Alkalinity as CaCO3	mg/l	14		2	5	SM 2320B
Bicarbonate Carbonate	"	17 ND		2 2	5 5	"
	(E040279 0E) Same	oled:06/08/05 09:00	Dogojvodu	∠ 0 6/09/05 1		
KINGS CREEK 2 Water	-			00/09/05		014 450011
pH	pH Units	6.92 14	1-03	2	0.01 0.01	SM 4500H SM 2320B
Alkalinity as CaCO3 Bicarbonate	mg/l	17		2	5	3IVI 2320D
Carbonate	п	ND		2	5	п
KINGS CREEK 3 Water	(5060378-06) Samp	oled:06/08/05 09:00	Received:	06/09/05 1	11:50	
pН	pH Units	6.90	1-03		0.01 0.01	SM 4500H
Alkalinity as CaCO3	mg/l	15		2	5	SM 2320B
Bicarbonate	II .	18		2	5	"
Carbonate		ND		2	5	"
SUMMIT LAKE 1 Water	· (5060378-07) Samp	oled:06/09/05 08:3	0 Received:	06/09/05		
pH	pH Units	5.90		0.01	0.01	SM 4500H+
Alkalinity as CaCO3	mg/l	5 5		2 2	5 5	SM 2320B
Bicarbonate Carbonate	ıı .	ND		2	5 5	"
SUMMIT LAKE 2 Water	· (5060378-08) Samı	oled:06/09/05 08:3	0 Received:	06/09/05 ·		
pН	pH Units	5.92		0.01	0.01	SM 4500H+
Alkalinity as CaCO3	mg/l	5		2	5	SM 2320B
Bicarbonate	ı	5		2	5	n .
Carbonate	II .	ND		2	5	"
SUMMIT LAKE 3 Water	(5060378-09) Samı	oled:06/09/05 08:3	O Received:	06/09/05	11:50	
pН	pH Units	5.90		0.01	0.01	SM 4500H+
Alkalinity as CaCO3	mg/l	5		2	5	SM 2320B
Bicarbonate	"	6 ND		2 2	5 5	"
Carbonate HOT SPRINGS CREEK 1	Water (5060378-10)	ND Sampled:06/08/0	05 14·20 Pa		o9/05 11:50	
	, ,	•	20 14.30 Re			CM 4FOOL
pH Alkalinity as CaCO3	pH Units ma/l	7.33 35		0.01 2	0.01 5	SM 4500H+ SM 2320B
Bicarbonate	mg/l	43		2	5 5	3IVI 232UB
Carbonate	п	ND		2	5	"

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521 Attention: CHRIS CURRENS

Project: NPS - BASELINE WATER QUALITY INVENTORY LASSEN VNP

General Chemistry

Analyte		Units	Results	Qualifier	MDL	RL	Method
HOT SPRINGS CREEK 2	Water	(5060378-11)	Sampled:06/08	8/05 14:30	Received:06/09	9/05 11:50	
pH		pH Units	7.55		0.01	0.01	SM 4500H+
Alkalinity as CaCO3		mg/l	36		2	5	SM 2320B
Bicarbonate		II .	43		2	5	II .
Carbonate		11	ND		2	5	II .
HOT SPRINGS CREEK 3	Water	(5060378-12)	Sampled:06/08	8/05 14:30	Received:06/09	9/05 11:50	
pН		pH Units	7.63		0.01	0.01	SM 4500H+
Alkalinity as CaCO3		mg/l	36		2	5	SM 2320B
Bicarbonate		11	44		2	5	II .
Carbonate		"	ND		2	5	"
LITTLE WILLOW LAKE 1	Water	(5060378-13)	Sampled:06/0	8/05 12:45	Received:06/0	9/05 11:50	
pH		pH Units	7.52		0.01	0.01	SM 4500H+
Alkalinity as CaCO3		mg/l	6		2	5	SM 2320B
Bicarbonate		II .	7		2	5	II .
Carbonate		"	ND		2	5	"
LITTLE WILLOW LAKE 2	Water	(5060378-14)	Sampled:06/0	8/05 12:45	Received:06/0	9/05 11:50	
pH		pH Units	7.18		0.01	0.01	SM 4500H+
Alkalinity as CaCO3		mg/l	6		2	5	SM 2320B
Bicarbonate		II .	7		2	5	"
Carbonate		11	ND		2	5	II .
LITTLE WILLOW LAKE 3	Water	(5060378-15)	Sampled:06/0	8/05 12:45	Received:06/0	9/05 11:50	
pH		pH Units	6.89		0.01	0.01	SM 4500H+
Alkalinity as CaCO3		mg/l	6		2	5	SM 2320B
Bicarbonate		II .	7		2	5	"
Carbonate		II .	ND		2	5	"

Basic Laboratory, Inc.

California D.O.H.S. Cert #1677

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521

Attention: CHRIS CURRENS

Project: NPS - BASELINE WATER QUALITY INVENTORY LASSEN VNP

Microbiology

Analyte	Units	Results Qu	alifier MDL	RL	Method
SUMMIT LAKE 1 Water (50603	78-07) Sampled	d:06/09/05 08:30	Received:06/09/05 11:5	0	
Total Coliforms	MPN/100 ml	17		2	SM 9221B/E
Fecal Coliforms	п	<2		2	п
SUMMIT LAKE 2 Water (50603	78-08) Sampled	d:06/09/05 08:30	Received:06/09/05 11:5	0	
Total Coliforms	MPN/100 ml	2		2	SM 9221B/E
Fecal Coliforms	"	<2		2	"
SUMMIT LAKE 3 Water (50603	78-09) Sampled	d:06/09/05 08:30	Received:06/09/05 11:5	0	
Total Coliforms	MPN/100 ml	8		2	SM 9221B/E
Fecal Coliforms	"	<2		2	"
MANZANITA LAKE 1 Water (50	60378-16) Sam	npled:06/09/05 09:	:30 Received:06/09/05 1	1:50	
Total Coliforms	MPN/100 ml	11		2	SM 9221B/E
Fecal Coliforms	"	<2		2	"
MANZANITA LAKE 2 Water (50	60378-17) Sam	npled:06/09/05 09:	:30 Received:06/09/05 1	1:50	
Total Coliforms	MPN/100 ml	13		2	SM 9221B/E
Fecal Coliforms	"	2		2	"
MANZANITA LAKE 3 Water (50	60378-18) Sam	npled:06/09/05 09:	:30 Received:06/09/05 1	1:50	
Total Coliforms	MPN/100 ml	70		2	SM 9221B/E
Fecal Coliforms	"	<2		2	"

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521 Attention: CHRIS CURRENS

Project: NPS - BASELINE WATER QUALITY INVENTORY LASSEN VNP

Quality Control Data

				Spike	Source		%REC
Analyte	Result	RL	Units	Level	Result	%REC	Limits
			Gen	eral Chem	istry		
Batch B5F0188 - Gener	al Prep - GC						
LCS							
рН	7.05		pH Units	7.00		101	80-120
Duplicate	Source: 5060378-01						
рН	6.77	0.01	pH Units		6.76		
Duplicate	Source: 5060378-11						
рН	7.60	0.01	pH Units		7.55		
Batch B5F0237 - Gener	al Prep - GC						

Blank						
Alkalinity as CaCO3	ND	5	mg/l			
Bicarbonate	ND	5	mg/l			
Carbonate	ND	5	mg/l			
LCS						
Alkalinity as CaCO3	0.05		mg/l	0.0500	100	80-120
Duplicate	Source: 5060298-01					
Alkalinity as CaCO3	50.0	5	mg/l		50	
Duplicate	Source: 5060298-11					
Alkalinity as CaCO3	18.0	5	mg/l		18	
Batch B5F0309 - Genera	l Prep - GC					
Blank						
Alkalinity as CaCO3	ND	5	mg/l			
Bicarbonate	ND	5	mg/l			
Carbonate	ND	5	mg/l			
LCS						
Alkalinity as CaCO3	0.05		mg/l	0.0500	100	80-120
Duplicate	Source: 5060378-06					
Alkalinity as CaCO3	15.0	5	mg/l		15	
Duplicate	Source: 5060491-02					
Alkalinity as CaCO3	138	5	mg/l		136	

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521 Attention: CHRIS CURRENS

Project: NPS - BASELINE WATER QUALITY INVENTORY LASSEN VNP

Notes and Definitions

1-03	Sample was received past the EPA recommended holding time.
A-01	<2
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the detection limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

< Less than reporting limit

 \leq Less than or equal to reporting limit

> Greater than reporting limit

 \geq Greater than or equal to reporting limit

MDL Method Detection Limit

RL/ML Minimum Level of Quantitation

MCL/AL Maxium Contaminant Level/Action Level

mg/kg Results reported as wet weight
TTLC Total Threshold Limit Concentration
STLC Soluble Threshold Limit Concentration
TCLP Toxicity Characteristic Leachate Procedure

Approved By
Basic Laboratory, Inc.
California D.O.H.S. Cert #1677

Lab No: 5060378 **Reported:** 06/15/05

Phone: (707) 825-5189

	Analyzed	Prepared	Batch	
1+	06/11/05	06/09/05 06/11/05	06/09/05 B5F0237	B5F0188
I+	06/11/05	06/09/05 06/11/05 "	06/09/05 B5F0237 "	B5F0188
I+	06/11/05 "	06/09/05 06/11/05	06/09/05 B5F0237 "	B5F0188
1+	06/11/05	06/09/05 06/11/05 "	06/09/05 B5F0237	B5F0188
1+	06/11/05	06/09/05 06/11/05 "	06/09/05 B5F0237 "	B5F0188
I+	06/14/05	06/09/05 06/14/05 "	06/09/05 B5F0309 "	B5F0188
	06/09/05 06/14/05 "	06/09/05 06/14/05 "	B5F0188 B5F0309	
	06/09/05 06/14/05 "	06/09/05 06/14/05 "	B5F0188 B5F0309 "	
	06/09/05 06/14/05 "	06/09/05 06/14/05 "	B5F0188 B5F0309 "	
	06/09/05 06/14/05 "	06/09/05 06/14/05 "	B5F0188 B5F0309 "	

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Lab No: 5060378 **Reported:** 06/15/05

Phone: (707) 825-5189

Analyzed	Prepared	Batch
06/09/05 06/14/05 "	06/09/05 06/14/05 "	B5F0188 B5F0309
06/09/05 06/14/05 "	06/09/05 06/14/05 "	B5F0188 B5F0309
06/09/05 06/14/05 "	06/09/05 06/14/05 "	B5F0188 B5F0309 "
06/09/05 06/14/05 "	06/09/05 06/14/05 "	B5F0188 B5F0309 "
06/09/05 06/14/05 "	06/09/05 06/14/05 "	B5F0188 B5F0309

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Lab No: 5060378 **Reported:** 06/15/05

Phone: (707) 825-5189

Analyzed	Prepared	Batch
06/13/05	06/09/05	B5F0263

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Lab No: 5060378 **Reported:** 06/15/05

Phone: (707) 825-5189

P.O. #

RPD RPD Qualifier

0.148 20

0.660 20

0.00 20

0.00 20

0.00 20

1.46 20

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Lab No: 5060378 **Reported:** 06/15/05

Phone: (707) 825-5189

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521 Attention: CHRIS CURRENS

Project: NPS - BASELINE WATER QUALITY INVENTORY LASSEN PROJECT

General Chemistry

Analyte	Units	Results Qualifi	er MDL	RL	Method
SNAG LAKE 1 Surface Water (5	090055-01) San	npled:09/01/05 09:00	Received:09/01/05	15:51	
pH	pH Units	8.12	0.01	0.01	SM 4500H+
Alkalinity as CaCO3	mg/l	23	2	5	SM 2320B
Hydroxide	ıı	ND	2	5	u u
Bicarbonate	· ·	28	2	5	· ·
Carbonate	"	ND	2	5	"
Specific Conductance	umhos/cm	40	2	10	SM 2510B
SNAG LAKE 2 Surface Water (5	090055-02) San	npled:09/01/05 09:00	Received:09/01/05	15:51	
Alkalinity as CaCO3	mg/l	23	2	5	SM 2320B
Hydroxide	II .	ND	2	5	п
Bicarbonate	II	28	2	5	"
Carbonate	"	ND	2	5	"
SNAG LAKE 3 Surface Water (5	090055-03) San	•	Received:09/01/05		
Alkalinity as CaCO3	mg/l	22	2	5	SM 2320B
Hydroxide	"	ND	2	5	
Bicarbonate	"	27	2	5	
Carbonate		ND	2	5	
HORSESHOE LAKE 1 Surface Wat	ter (5090055-04	Sampled:09/01/05 1	0:30 Received:09.	/01/05 15:51	
рН	pH Units	7.84	0.01	0.01	SM 4500H+
Alkalinity as CaCO3	mg/l	18	2	5	SM 2320B
Hydroxide	"	ND	2	5	"
Bicarbonate		22	2	5	
Carbonate		ND 32	2	5 10	
Specific Conductance HORSESHOE LAKE 2 Surface Wat	umhos/cm ter (5090055-05			/01/05 15:51	SM 2510B
	•	, .			CM 2220D
Alkalinity as CaCO3	mg/l	18 ND	2	5 5	SM 2320B
Hydroxide Bicarbonate	п	ND 22	2	5 5	n .
Carbonate		ND	2	5	
HORSESHOE LAKE 3 Surface Wat	ter (5090055-06			/01/05 15:51	
Alkalinity as CaCO3	mg/l	18	2	5	SM 2320B
Hydroxide	"	ND	2	5	"
Bicarbonate	п	22	2	5	п
Carbonate	п	ND	2	5	п
CRYSTAL LAKE 1 Surface Water	(5090055-07)	Sampled:09/01/05 12:3	0 Received:09/01	/05 15:51	
pH	pH Units	7.16	0.01	0.01	SM 4500H+
Alkalinity as CaCO3	mg/l	5	2	5	SM 2320B
Hydroxide	u u	ND	2	5	u u
Bicarbonate	II .	6	2	5	II .
Carbonate	ıı	ND	2	5	"
Specific Conductance	umhos/cm	6	J	2 10	SM
CRYSTAL LAKE 2 Surface Water	(5090055-08)	Sampled:09/01/05 12:3	0 Received:09/01	/05 15:51	
Alkalinity as CaCO3	mg/l	5	2	5	SM 2320B
Hydroxide	"	ND	2	5	"
Bicarbonate		6	2	5	
Carbonate	u .	ND	2	5	"
CRYSTAL LAKE 3 Surface Water	(5090055-09)	Sampled:09/01/05 12:3	0 Received:09/01	/05 15:51	
Alkalinity as CaCO3	mg/l	6	2	5	SM 2320B
Hydroxide	II .	ND	2	5	II .
Bicarbonate	"	7	2	5	u u

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521

Attention: CHRIS CURRENS

Project: NPS - BASELINE WATER QUALITY INVENTORY LASSEN PROJECT

General Chemistry

Analyte CRYSTAL LAKE 3 Surface Water	Units (5090055-09)	Results Qualifier Sampled:09/01/05 12:30		RL /05 15:51	Method
Carbonate JUNIPER LAKE 1 Surface Water	(5090055-10)	ND Sampled:09/01/05 13:00	2	5	
pH Alkalinity as CaCO3 Hydroxide Bicarbonate Carbonate Specific Conductance JUNIPER LAKE 2 Surface Water	pH Units mg/l " " umhos/cm (5090055-11)	7.14 6 ND 7 ND 8 Sampled:09/01/05 13:00	0.01 2 2 2 2 2 3 Received:09/01	0.01 5 5 5 5 5 2 10	SM 4500H+ SM 2320B " " " SM
Alkalinity as CaCO3 Hydroxide Bicarbonate Carbonate JUNIPER LAKE 3 Surface Water	mg/l (5090055-12)	6 ND 7 ND Sampled:09/01/05 13:00	2 2 2 2 Received:09/01	5 5 5 705 15:51	SM 2320B " "
Alkalinity as CaCO3 Hydroxide Bicarbonate Carbonate	mg/l " "	6 ND 7 ND	2 2 2 2	5 5 5 5	SM 2320B " "

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521

Attention: CHRIS CURRENS

Project: NPS - BASELINE WATER QUALITY INVENTORY LASSEN PROJECT

Microbiology

Analyte		Uı	iits	Results	Qualifie	r MDL	RL	Method
SNAG LAKE 1	Surface Water	(5090055-01) Samp	oled:09/01/0	5 09:00 R	eceived:09/01/0	5 15:51	
Total Coliforms Fecal Coliforms		MPN/	100 ml "	140 2			2	SM 9221B/E
	Surface Water	(5090055-02) Samp	oled:09/01/0	5 09:00 R	eceived:09/01/0	5 15:51	
Total Coliforms Fecal Coliforms SNAG LAKE 3	Surface Water		100 ml ") Samp	27 <2 oled:09/01/0	5 09:00 R	eceived:09/01/0	2 2 5 15:51	SM 9221B/E "
Total Coliforms Fecal Coliforms HORSESHOE L	AKE 1 Surface		100 ml " 055-04)	23 <2 Sampled:0	9/01/05 10	:30 Received:09	2 2 2/01/05 15:51	SM 9221B/E
Total Coliforms Fecal Coliforms HORSESHOE L	AKE 2 Surface		100 ml ")55-05)	<2 <2 Sampled:0	9/01/05 10	:30 Received:09	2 2 2/01/05 15:51	SM 9221B/E
Total Coliforms		MPN/	100 ml	24			2	SM 9221B/E

Fecal Coliforms	п	<2	2	"
HORSESHOE LAKE 3 Surface Wat	ter (5090055-0	6) Sampled:09/01/05 10:	30 Received:09/01/05 15:51	
Total Coliforms Fecal Coliforms	MPN/100 ml	21 <2	2 2	SM 9221B/E
CRYSTAL LAKE 1 Surface Water	(5090055-07)	Sampled:09/01/05 12:30	Received:09/01/05 15:51	
Total Coliforms Fecal Coliforms	MPN/100 ml	9 2	2 2	SM 9221B/E
CRYSTAL LAKE 2 Surface Water	(5090055-08)	Sampled:09/01/05 12:30	Received:09/01/05 15:51	
Total Coliforms Fecal Coliforms	MPN/100 ml	5 2	2 2	SM 9221B/E
CRYSTAL LAKE 3 Surface Water	(5090055-09)	Sampled:09/01/05 12:30	Received:09/01/05 15:51	
Total Coliforms Fecal Coliforms	MPN/100 ml	17 5	2 2	SM 9221B/E
JUNIPER LAKE 1 Surface Water	(5090055-10)	Sampled:09/01/05 13:00	Received:09/01/05 15:51	
Total Coliforms Fecal Coliforms	MPN/100 ml	2 <2	2 2	SM 9221B/E
JUNIPER LAKE 2 Surface Water	(5090055-11)	Sampled:09/01/05 13:00	Received:09/01/05 15:51	
Total Coliforms Fecal Coliforms	MPN/100 ml	4 <2	2 2	SM 9221B/E
JUNIPER LAKE 3 Surface Water	(5090055-12)	Sampled:09/01/05 13:00	Received:09/01/05 15:51	
Total Coliforms Fecal Coliforms	MPN/100 ml "	4 <2	2 2	SM 9221B/E

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521

Attention: CHRIS CURRENS

Project: NPS - BASELINE WATER QUALITY INVENTORY LASSEN PROJECT

Quality Control Data

				Spike	Source		%REC
Analyte	Result	RL	Units	Level	Result	%REC	Limits
			Genera	al Chemis	try		
Batch B510037 - General Prep - GC							
LCS							
На	7.03		pH Units	7.00		100	80-120

Duplicate pH	Source: 5080826-01	6.67	0.01	pH Units		6.68		
Batch B510055 - General	Prep - GC							
Blank								
Specific Conductance		ND	10	umhos/cm				
LCS								
Specific Conductance		99.0		umhos/cm	100		99.0	80-120
Duplicate	Source: 5081201-01							
Specific Conductance		40.0	10	umhos/cm		36		
Batch B510106 - General	Prep - GC							
Blank								
Alkalinity as CaCO3		ND	5	mg/l				
Hydroxide		ND	5	mg/l				
Bicarbonate		ND	5	mg/l				
Carbonate		ND	5	mg/l				
LCS								
Alkalinity as CaCO3		0.05		mg/l	0.0500		100	80-120
Duplicate	Source: 5090055-01							
Alkalinity as CaCO3		23.0	5	mg/l		23		
Duplicate	Source: 5090055-11							
Alkalinity as CaCO3		6.0	5	mg/l		6		

Basic Laboratory, Inc. California D.O.H.S. Cert #1677

Report To: U S GEOLOGICAL SURVEY - REDWOOD FIELD STATION

1655 HEINDEN RD ARCATA, CA 95521 Attention: CHRIS CURRENS

Project: NPS - BASELINE WATER QUALITY INVENTORY LASSEN PROJECT

Notes and Definitions

J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag). The J flag is equivalent to the DNQ Estimate

A-01 <2

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the detection limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference
< Less than reporting limit

 \leq Less than or equal to reporting limit

> Greater than reporting limit

≥ Greater than or equal to reporting limit

MDL Method Detection Limit

RL/ML Minimum Level of Quantitation

MCL/AL Maxium Contaminant Level/Action Level

mg/kg Results reported as wet weight
TTLC Total Threshold Limit Concentration
STLC Soluble Threshold Limit Concentration
TCLP Toxicity Characteristic Leachate Procedure

Approved By
Basic Laboratory, Inc.
California D.O.H.S. Cert #1677

Lab No: 5090055 **Reported:** 09/08/05

Phone: (707) 825-5189

Analyzed	Prepared	Batch	
09/01/05	09/01/05	B510037	
09/06/05	09/06/05	B5I0106	
"			
"	II.		
09/02/05	09/02/05	B510055	
09/06/05	09/06/05	B5I0106	
n n	п	"	
"	"	"	
09/06/05	09/06/05	B5I0106	
"	п	"	
"	"	"	
09/01/05	09/01/05	B510037	
09/06/05	09/06/05	B510037	
"	II.	"	
"	II.	"	
00/02/05	00/02/05	DE LOOFE	
09/02/05	09/02/05	B510055	
09/06/05	09/06/05	B5I0106	
II .	п		
"	"	"	
09/06/05	09/06/05	B5I0106	
"	II .	"	
"	п	"	
_	_		
09/01/05	09/01/05	B510037	
09/06/05	09/06/05	B5I0106	
u u	· ·	"	
"	II .	"	
05400	00/00/05	"	DELOGEE
2510B	09/02/05	09/02/05	B510055
09/06/05	09/06/05	B5I0106	
u u	п		
II	п		
"	п	"	
09/06/05	09/06/05	B5I0106	
"	II.	"	
		ш	

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Lab No: 5090055 **Reported:** 09/08/05

Phone: (707) 825-5189

Analyzed	Prepared	Batch	
u	09/06/05	и	
09/01/05 09/06/05 " " " 2510B	09/01/05 09/06/05 " " " 09/02/05	B510037 B510106 " " "	B510055
09/06/05	09/06/05	B5I0106 " "	
09/06/05	09/06/05	B5I0106	

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Lab No: 5090055 **Reported:** 09/08/05

Phone: (707) 825-5189

Analyzed	Prepared	Batch
09/05/05	09/01/05	B5I0101

09/05/05 09/01/05 B5I0101 09/05/05 09/01/05 B5I0101 09/01/05 09/05/05 B5I0101 09/05/05 09/01/05 B5I0101 09/05/05 B5I0101 09/01/05 09/05/05 09/01/05 B5I0101 09/05/05 09/01/05 B5I0101

Page 4 of 6

Lab No: 5090055 **Reported:** 09/08/05

Phone: (707) 825-5189

P.O. #

RPD

RPD Limit Qualifier

0.150 20

10.5 20

0.00 20

0.00 20

Page 5 of 6

Lab No: 5090055

Reported: 09/08/05

Phone: (707) 825-5189

Site	Date	Temp ©	Specific C D C) 1	рН
Orgeon Caves National Monument (ORCA)					
Lwr Cave Creek #1 (@ bridge)	5/24/2005	7.3	na	11.22 ו	na
		7.28	na	11.08 ı	na
		7.29	na	11.12 ו	na
Lwr Cave Creek@ Culvert	5/24/2005			11.61 ו	
		6.48		11.51 ı	
		6.36	na	11.3 ı	na
Marble Springs #3	5/24/2005			11.87 ı	
		6.43		11.86 ו	
		6.64	na	11.52 ı	na
Cave Pool @ Washington Mont	5/24/2005			11.15 ו	
(Lake Michigan)		6.74		11.14 ו	
		6.72	na	11.2 ו	na
Cave Pool #2 R7D	5/24/2005	6.79	na	11.15 ו	na
(River Styx)		6.79	na	11.15 ı	na
		6.79	na	11 ו	na
Lwr Cave Creek @ Entrance	5/24/2005	5.68	na	11.62 ו	na
		5.68	na	11.6 ı	na
		5.68	na	11.48 ı	na
Upr Cave Creek	5/24/2005			11.08 ו	
		6.25		11.07 ı	
		6.26	na	11.04 ı	na
Cove Pool #2 P7D	10/12/200E	6.04	1.11	10.70	0.76
Cave Pool #2 R7D (River Styx)	10/12/2005	6.84 6.83		10.78 10.8	8.76 8.55
(River Styx)		6.82		10.65	8.52
Cave Pool @ Washington Monument	10/12/2005			10.48	8.58
(Lake Michigan)		6.88		10.48	8.56
		6.89	139	10.51	8.56
Lwr Cave Creek @ ent	10/12/2005			11.05	8.38
		5.88		11.09	8.38
		5.89	0.138	11.08	8.39
Lwr Cave Creek @ Brg	10/12/2005			10.71	8.8
		7.3		10.6	8.81
		7.3	155	10.63	8.81
Marble Springs	10/12/2005	6.92	0.145	10.95	8.82
		6.89		10.8	8.79

		6.88	0.144	10.84	8.77
Lwr Cave Creek @ culv	10/12/2005	6.7	152	10.71	8.63
		6.78	154	10.62	8.6
		6.86	156	10.41	8.57
Upr Cave Creek	10/12/2005 na	**	no water**	na	
Lake Creek @ culv	10/13/2005	5.62 5.61 5.59	62 62 62	10.79 10.91 11.03	8.67 8.56 8.53

Coordinate	fecal sample collected	water sample collected	Nitrate/CI sample collected
N: 4660750.428	yes	yes	yes
E: 465943.526	yes	yes	yes
	yes	yes	yes
42*05'55.33"N	na	yes	yes
123*24'30.33"W	na	yes	yes
	na	yes	yes
N: 4660832.9	na	yes	yes
E: 466155.135	na	yes	yes
	na	yes	yes
N 4660617.546	na	yes	yes
E 466360.0448	na	yes	yes
	na	yes	yes
N 4660558.714	na	yes	yes
E 466348.9867	na	yes	yes
	na	yes	yes
N: 4660749.009	yes	yes	na
E: 466306.663	yes	yes	na
	yes	yes	na
N: 4660529.33	na	yes	yes
E: 466614.351	na	yes	yes
	na	yes	yes
N 4660558.714	na	yes	na
E 466348.9867	na	yes	na
	na	yes	na
N 4660617.546	na	yes	na
E 466360.0448	na	yes	na
	na	yes	na
N: 4660749.009	na	yes	na
E: 466306.663	na	yes	na
2. 100000.000	na	yes	na
	na	you	na -
N: 4660750.428	yes	yes	yes
E: 465943.526	yes	yes	yes
	yes	yes	yes
N: 4660832.9	na	yes	na
E: 466155.135	na	yes	na
		-	

	na	yes	na
42*05'55.33"N 123*24'30.33"W	yes yes	na na	
123 24 30.33 W	yes	na	
N: 4660529.33 E: 466614.351	na	na	na
N: 4661484.97 E: 467777.175	na na na	yes yes	yes yes yes

Oli a rat Carras ID	Data Calla ata d	A l !- D t	Dana Data	Deference
ClientSampID		•	PrepDate	Reference
LCC @ Bridge #1	5/24/2005	5/27/2005		Std. Meth. 19th Ed.
LCC @ Bridge #1	5/24/2005	5/27/2005		Std. Meth. 19th Ed.
LCC @ Bridge #1	5/24/2005	5/25/2005		Std. Meth. 19th Ed.
LCC @ Bridge #2	5/24/2005	5/27/2005		Std. Meth. 19th Ed.
LCC @ Bridge #3	5/24/2005	5/27/2005		Std. Meth. 19th Ed.
LCC @ Bridge #1	5/24/2005	5/26/2005		EPA 300.0
LCC @ Bridge #1	5/24/2005	5/26/2005		EPA 300.0
LCC @ Bridge #2	5/24/2005	5/26/2005		EPA 300.0
LCC @ Bridge #2	5/24/2005	5/26/2005		EPA 300.0
LCC @ Bridge #3	5/24/2005	5/26/2005		EPA 300.0
LCC @ Bridge #3	5/24/2005	5/26/2005		EPA 300.0
LCC @ Culvert #1	5/24/2005	5/27/2005		Std. Meth. 19th Ed.
LCC @ Culvert #1	5/24/2005	5/27/2005		Std. Meth. 19th Ed.
LCC @ Culvert #1	5/24/2005	5/25/2005		Std. Meth. 19th Ed.
LCC @ Culvert #2	5/24/2005	5/27/2005		Std. Meth. 19th Ed.
LCC @ Culvert #3	5/24/2005	5/27/2005		Std. Meth. 19th Ed.
LCC @ Culvert #1	5/24/2005	5/26/2005		EPA 300.0
LCC @ Culvert #1	5/24/2005	5/26/2005		EPA 300.0
LCC @ Culvert #2	5/24/2005	5/26/2005		EPA 300.0
LCC @ Culvert #2	5/24/2005	5/26/2005		EPA 300.0
LCC @ Culvert #3	5/24/2005	5/26/2005		EPA 300.0
LCC @ Culvert #3	5/24/2005	5/26/2005		EPA 300.0
Marble Spring #1	5/24/2005	5/27/2005		Std. Meth. 19th Ed.
Marble Spring #1	5/24/2005	5/27/2005		Std. Meth. 19th Ed.
Marble Spring #1	5/24/2005	5/25/2005		Std. Meth. 19th Ed.
Marble Spring #2	5/24/2005	5/27/2005		Std. Meth. 19th Ed.
Marble Spring #3	5/24/2005	5/27/2005		Std. Meth. 19th Ed.
Cave Pool Washington #1	5/24/2005	5/27/2005		Std. Meth. 19th Ed.
Cave Pool Washington #1	5/24/2005	5/27/2005		Std. Meth. 19th Ed.
Cave Pool Washington #1	5/24/2005	5/25/2005		Std. Meth. 19th Ed.
Cave Pool Washington #2	5/24/2005	5/27/2005		Std. Meth. 19th Ed.
Cave Pool Washington #3	5/24/2005	5/27/2005		Std. Meth. 19th Ed.
Cave Pool #1	5/24/2005	5/27/2005		Std. Meth. 19th Ed.
Cave Pool #1	5/24/2005	5/27/2005		Std. Meth. 19th Ed.
Cave Pool #1	5/24/2005	5/25/2005		Std. Meth. 19th Ed.
Cave Pool #2	5/24/2005	5/27/2005		Std. Meth. 19th Ed.
Cave Pool #3	5/24/2005	5/27/2005		Std. Meth. 19th Ed.
LCC @ Entrance #1	5/24/2005	5/27/2005		Std. Meth. 19th Ed.
LCC @ Entrance #1	5/24/2005	5/27/2005		Std. Meth. 19th Ed.
LCC @ Entrance #1	5/24/2005	5/25/2005		Std. Meth. 19th Ed.
LCC @ Entrance #2	5/24/2005	5/27/2005		Std. Meth. 19th Ed.
LCC @ Entrance #3	5/24/2005	5/27/2005		Std. Meth. 19th Ed.
Upr Cave Ck #1	5/25/2005	5/27/2005		Std. Meth. 19th Ed.
Upr Cave Ck #1	5/25/2005	5/27/2005		Std. Meth. 19th Ed.
Upr Cave Ck #1	5/25/2005	5/25/2005		Std. Meth. 19th Ed.
-				
Upr Cave Ck #2	5/25/2005	5/27/2005		Std. Meth. 19th Ed.
Upr Cave Ck #3	5/25/2005	5/27/2005		Std. Meth. 19th Ed.
Lake Ck @ Culvert #1	5/25/2005	5/27/2005		Std. Meth. 19th Ed.
Lake Ck @ Culvert #1	5/25/2005	5/27/2005		Std. Meth. 19th Ed.
Lake Ck @ Culvert #1	5/25/2005	5/25/2005		Std. Meth. 19th Ed.

Lake Ck @ Culvert #2	5/25/2005	5/27/2005	Std. Meth. 19th Ed.
Lake Ck @ Culvert #3	5/25/2005	5/27/2005	Std. Meth. 19th Ed.
Lake Ck @ Culvert #1	5/25/2005	5/26/2005	EPA 300.0
Lake Ck @ Culvert #1	5/25/2005	5/26/2005	EPA 300.0
Lake Ck @ Culvert #2	5/25/2005	5/26/2005	EPA 300.0
Lake Ck @ Culvert #2	5/25/2005	5/26/2005	EPA 300.0
Lake Ck @ Culvert #3	5/25/2005	5/26/2005	EPA 300.0
Lake Ck @ Culvert #3	5/25/2005	5/26/2005	EPA 300.0

A 1.	D 1	DOL LINUT
Analyte		PQL UNIT
Alkalinity	110	1 mg/L CaCO3
Conductivity	210	1 µmhos/cm
pH	8.0	0 pH Units
Alkalinity	100	1 mg/L CaCO3
Alkalinity	100	1 mg/L CaCO3
Chloride	1.3	0.1 mg/L
Nitrate (as Nitrogen)	ND	0.1 mg/L
Chloride	1.3	0.1 mg/L
Nitrate (as Nitrogen)	ND	0.1 mg/L
Chloride	1.2	0.1 mg/L
Nitrate (as Nitrogen)	ND	0.1 mg/L
Alkalinity	100	1 mg/L CaCO3
Conductivity	200	1 µmhos/cm
рН	7.8	0 pH Units
Alkalinity	100	1 mg/L CaCO3
Alkalinity	100	1 mg/L CaCO3
Chloride	1.1	0.1 mg/L
Nitrate (as Nitrogen)	ND	0.1 mg/L
Chloride	1.1	0.1 mg/L
Nitrate (as Nitrogen)	ND	0.1 mg/L
Chloride	1.1	0.1 mg/L
Nitrate (as Nitrogen)	ND	0.1 mg/L
Alkalinity	100	1 mg/L CaCO3
Conductivity	210	1 µmhos/cm
рН	7.9	0 pH Units
Alkalinity	100	1 mg/L CaCO3
Alkalinity	100	1 mg/L CaCO3
Alkalinity	100	1 mg/L CaCO3
Conductivity	200	1 µmhos/cm
рН	7.9	0 pH Units
Alkalinity	100	1 mg/L CaCO3
Alkalinity	100	1 mg/L CaCO3
Alkalinity	110	1 mg/L CaCO3
Conductivity	220	1 µmhos/cm
рН	7.9	0 pH Units
Alkalinity	110	1 mg/L CaCO3
Alkalinity	110	1 mg/L CaCO3
Alkalinity	96	1 mg/L CaCO3
Conductivity	190	1 µmhos/cm
рН	7.6	0 pH Units
Alkalinity	96	1 mg/L CaCO3
Alkalinity	96	1 mg/L CaCO3
Alkalinity	64	1 mg/L CaCO3
Conductivity	130	1 µmhos/cm
рН	7.8	0 pH Units
Alkalinity	63	1 mg/L CaCO3
Alkalinity	64	1 mg/L CaCO3
Alkalinity	29	1 mg/L CaCO3
Conductivity	34	1 µmhos/cm
pН	7.3	0 pH Units

Alkalinity	30	1 mg/L CaCO3	
Alkalinity	30	1 mg/L CaCO3	
Chloride	0.61	0.1 mg/L	
Nitrate (as Nitrogen)	ND	0.1 mg/L	
Chloride	0.61	0.1 mg/L	
Nitrate (as Nitrogen)	ND	0.1 mg/L	
Chloride	0.61	0.1 mg/L	
Nitrate (as Nitrogen)	ND	0.1 mg/L	

ClientSampID	DateCollected	AnalysisDate	PrepDate	Reference
lower cave creek @ entrance 1	5/25/2005	5/25/2005		Std. Meth. 19th Ed.
lower cave crk @ entrance 1	5/25/2005	5/25/2005		Std. Meth. 19th Ed.
lower cave crk @ entrance 2	5/25/2005	5/25/2005		Std. Meth. 19th Ed.
lcc @ entrance 2	5/25/2005	5/25/2005		Std. Meth. 19th Ed.
lower cave crk @ entrance 3	5/25/2005	5/25/2005		Std. Meth. 19th Ed.
lcc @ entrance 3	5/25/2005	5/25/2005		Std. Meth. 19th Ed.
lower cave crk @ Bridge 1	5/25/2005	5/25/2005		Std. Meth. 19th Ed.
Icc @ B 1	5/25/2005	5/25/2005		Std. Meth. 19th Ed.
lwr cave ck. @ bridge 2	5/25/2005	5/25/2005		Std. Meth. 19th Ed.
lwr cave ck. @ bridge 2	5/25/2005	5/25/2005		Std. Meth. 19th Ed.
lower cave crk @ Bridge 3	5/25/2005	5/25/2005		Std. Meth. 19th Ed.
lower cave creek @ Bridge 3	5/25/2005	5/25/2005		Std. Meth. 19th Ed.

Analyte	Result	PQL	UNIT
Fecal Coliform	<2		2 MPN/100mL
Total Coliform	<2		2 MPN/100mL
Fecal Coliform	<2		2 MPN/100mL
Total Coliform	<2		2 MPN/100mL
Fecal Coliform	<2		2 MPN/100mL
Total Coliform	2		2 MPN/100mL
Fecal Coliform	4		2 MPN/100mL
Total Coliform	4		2 MPN/100mL
Fecal Coliform	2		2 MPN/100mL
Total Coliform	8		2 MPN/100mL
Fecal Coliform		4	2 MPN/100mL
Total Coliform	27		2 MPN/100mL

CliantCompID	DataCallagtad	A nobraia Data	DranData	Deference	Analuta
ClientSampID	DateCollected	AnalysisDate	Prepuate		Analyte
Lwr Cave Ck @ culvert-1	10/12/2005			EPA 300.0	Chloride
Lwr Cave Ck @ culvert-1	10/12/2005			EPA 300.0	Nitrate (as
Lwr Cave Ck @ culvert-2	10/12/2005			EPA 300.0	Chloride
Lwr Cave Ck @ culvert-2	10/12/2005			EPA 300.0	Nitrate (as
Lwr Cave Ck @ culvert-3	10/12/2005			EPA 300.0	Chloride
Lwr Cave Ck @ culvert-3	10/12/2005	10/13/2005		EPA 300.0	Nitrate (as
Cave Pool #2-1	10/12/2005	10/24/2005		Std. Meth. 19th Ed.	Alkalinity
Cave Pool #2-1	10/12/2005	10/26/2005		Std. Meth. 19th Ed.	Bicarbonat 6
Cave Pool #2-1	10/12/2005	10/26/2005		Std. Meth. 19th Ed.	Carbonate
Cave Pool #2-1	10/12/2005	10/26/2005		Std. Meth. 19th Ed.	Hydroxide
Cave Pool #2-1	10/12/2005	10/13/2005		Std. Meth. 19th Ed.	рH
Cave Pool #2-2	10/12/2005	10/24/2005		Std. Meth. 19th Ed.	Alkalinity
Cave Pool #2-2	10/12/2005	10/26/2005		Std. Meth. 19th Ed.	•
Cave Pool #2-2	10/12/2005			Std. Meth. 19th Ed.	
Cave Pool #2-2	10/12/2005			Std. Meth. 19th Ed.	
Cave Pool #2-2	10/12/2005			Std. Meth. 19th Ed.	•
Cave Pool #2-3	10/12/2005			Std. Meth. 19th Ed.	•
Cave Pool #2-3	10/12/2005			Std. Meth. 19th Ed.	•
Cave Pool #2-3	10/12/2005			Std. Meth. 19th Ed.	
Cave Pool #2-3	10/12/2005			Std. Meth. 19th Ed.	
Cave Pool #2-3	10/12/2005			Std. Meth. 19th Ed.	•
Wash Monument-1	10/12/2005			Std. Meth. 19th Ed.	•
Wash Monument-1	10/12/2005			Std. Meth. 19th Ed.	•
Wash Monument-1	10/12/2005			Std. Meth. 19th Ed.	
Wash Monument-1	10/12/2005			Std. Meth. 19th Ed.	
Wash Monument-1	10/12/2005			Std. Meth. 19th Ed.	•
Wash Monument-2	10/12/2005			Std. Meth. 19th Ed.	•
Wash Monument-2	10/12/2005			Std. Meth. 19th Ed.	•
Wash Monument-2	10/12/2005			Std. Meth. 19th Ed.	
Wash Monument-2	10/12/2005			Std. Meth. 19th Ed.	
Wash Monument-2	10/12/2005			Std. Meth. 19th Ed.	•
Wash Monument-3	10/12/2005			Std. Meth. 19th Ed.	•
Wash Monument-3	10/12/2005			Std. Meth. 19th Ed.	•
Wash Monument-3	10/12/2005			Std. Meth. 19th Ed.	
Wash Monument-3	10/12/2005			Std. Meth. 19th Ed.	
Wash Monument-3	10/12/2005			Std. Meth. 19th Ed.	•
Lwr Cave Ck @ entrance-1	10/12/2005			Std. Meth. 19th Ed.	•
Lwr Cave Ck @ entrance-1	10/12/2005			Std. Meth. 19th Ed.	-
Lwr Cave Ck @ entrance-1	10/12/2005			Std. Meth. 19th Ed.	
Lwr Cave Ck @ entrance-1	10/12/2005			Std. Meth. 19th Ed.	
Lwr Cave Ck @ entrance-1	10/12/2005			Std. Meth. 19th Ed.	•
Lwr Cave Ck @ entrance-2	10/12/2005			Std. Meth. 19th Ed.	•
Lwr Cave Ck @ entrance-2	10/12/2005			Std. Meth. 19th Ed.	•
Lwr Cave Ck @ entrance-2				Std. Meth. 19th Ed.	
Lwr Cave Ck @ entrance-2	10/12/2005 10/12/2005				
Lwr Cave Ck @ entrance-2				Std. Meth. 19th Ed.	•
	10/12/2005			Std. Meth. 19th Ed.	•
Lwr Cave Ck @ entrance-3 Lwr Cave Ck @ entrance-3	10/12/2005			Std. Meth. 19th Ed.	•
	10/12/2005			Std. Meth. 19th Ed.	
Lwr Cave Ck @ entrance-3	10/12/2005			Std. Meth. 19th Ed.	
Lwr Cave Ck @ entrance-3	10/12/2005	10/26/2005		Std. Meth. 19th Ed.	riyuruxide

Lwr Cave Ck @ entrance-3	10/12/2005	10/13/2005	Std. Meth. 19th Ed.	•
Lwr Cave Ck @ bridge-1	10/12/2005	10/24/2005	Std. Meth. 19th Ed.	Alkalinity
Lwr Cave Ck @ bridge-1	10/12/2005	10/26/2005	Std. Meth. 19th Ed.	Bicarbonat
Lwr Cave Ck @ bridge-1	10/12/2005	10/26/2005	Std. Meth. 19th Ed.	Carbonate
Lwr Cave Ck @ bridge-1	10/12/2005	10/26/2005	Std. Meth. 19th Ed.	Hydroxide
Lwr Cave Ck @ bridge-1	10/12/2005	10/13/2005	Std. Meth. 19th Ed.	рН
Lwr Cave Ck @ bridge-2	10/12/2005	10/24/2005	Std. Meth. 19th Ed.	Alkalinity
Lwr Cave Ck @ bridge-2	10/12/2005	10/26/2005	Std. Meth. 19th Ed.	Bicarbonat
Lwr Cave Ck @ bridge-2	10/12/2005	10/26/2005	Std. Meth. 19th Ed.	Carbonate
Lwr Cave Ck @ bridge-2	10/12/2005	10/26/2005	Std. Meth. 19th Ed.	Hydroxide
Lwr Cave Ck @ bridge-2	10/12/2005	10/13/2005	Std. Meth. 19th Ed.	рH
Lwr Cave Ck @ bridge-3	10/12/2005	10/24/2005	Std. Meth. 19th Ed.	Alkalinity
Lwr Cave Ck @ bridge-3	10/12/2005	10/26/2005	Std. Meth. 19th Ed.	Bicarbonat
Lwr Cave Ck @ bridge-3	10/12/2005	10/26/2005	Std. Meth. 19th Ed.	Carbonate
Lwr Cave Ck @ bridge-3	10/12/2005	10/26/2005	Std. Meth. 19th Ed.	Hydroxide
Lwr Cave Ck @ bridge-3	10/12/2005	10/13/2005	Std. Meth. 19th Ed.	•
Marble Springs-1	10/12/2005	10/24/2005	Std. Meth. 19th Ed.	•
Marble Springs-1	10/12/2005	10/26/2005	Std. Meth. 19th Ed.	,
Marble Springs-1	10/12/2005	10/26/2005	Std. Meth. 19th Ed.	Carbonate
Marble Springs-1	10/12/2005	10/26/2005	Std. Meth. 19th Ed.	Hvdroxide
Marble Springs-1	10/12/2005	10/13/2005	Std. Meth. 19th Ed.	•
Marble Springs-2	10/12/2005	10/24/2005	Std. Meth. 19th Ed.	•
Marble Springs-2	10/12/2005	10/26/2005	Std. Meth. 19th Ed.	•
Marble Springs-2	10/12/2005	10/26/2005	Std. Meth. 19th Ed.	
Marble Springs-2	10/12/2005	10/26/2005	Std. Meth. 19th Ed.	
Marble Springs-2	10/12/2005	10/13/2005	Std. Meth. 19th Ed.	•
Marble Springs-3	10/12/2005	10/24/2005	Std. Meth. 19th Ed.	•
Marble Springs-3	10/12/2005	10/26/2005	Std. Meth. 19th Ed.	•
Marble Springs-3	10/12/2005	10/26/2005	Std. Meth. 19th Ed.	
Marble Springs-3	10/12/2005	10/26/2005	Std. Meth. 19th Ed.	
Marble Springs-3	10/12/2005	10/13/2005	Std. Meth. 19th Ed.	•
Lwr Cave Ck @ culvert-1	10/12/2005	10/24/2005	Std. Meth. 19th Ed.	•
Lwr Cave Ck @ culvert-1	10/12/2005	10/26/2005	Std. Meth. 19th Ed.	•
Lwr Cave Ck @ culvert-1	10/12/2005	10/26/2005	Std. Meth. 19th Ed.	
Lwr Cave Ck @ culvert-1	10/12/2005	10/26/2005	Std. Meth. 19th Ed.	
Lwr Cave Ck @ culvert-1	10/12/2005	10/13/2005	Std. Meth. 19th Ed.	•
Lwr Cave Ck @ culvert-2	10/12/2005	10/24/2005	Std. Meth. 19th Ed.	•
Lwr Cave Ck @ culvert-2	10/12/2005	10/26/2005	Std. Meth. 19th Ed.	•
Lwr Cave Ck @ culvert-2	10/12/2005	10/26/2005	Std. Meth. 19th Ed.	
Lwr Cave Ck @ culvert-2	10/12/2005	10/26/2005	Std. Meth. 19th Ed.	
Lwr Cave Ck @ culvert-2	10/12/2005	10/13/2005	Std. Meth. 19th Ed.	•
Lwr Cave Ck @ culvert-3	10/12/2005	10/24/2005	Std. Meth. 19th Ed.	•
Lwr Cave Ck @ culvert-3	10/12/2005	10/26/2005	Std. Meth. 19th Ed.	-
Lwr Cave Ck @ culvert-3	10/12/2005	10/26/2005	Std. Meth. 19th Ed.	
Lwr Cave Ck @ culvert-3	10/12/2005	10/26/2005	Std. Meth. 19th Ed.	
Lwr Cave Ck @ culvert-3	10/12/2005	10/13/2005	Std. Meth. 19th Ed.	•
Lake Ck-1	10/13/2005	10/24/2005	Std. Meth. 19th Ed.	•
Lake Ck-1	10/13/2005	10/24/2005	Std. Meth. 19th Ed.	•
Lake Ck-1	10/13/2005	10/26/2005	Std. Meth. 19th Ed.	
Lake Ck-1	10/13/2005	10/26/2005	Std. Meth. 19th Ed.	
Lake Ck-1	10/13/2005	10/26/2005	Std. Meth. 19th Ed.	•
Land On- I	10/13/2003	10/10/2003	Gia. Meill. 13th Ea.	РП

Lake Ck-2	10/13/2005	10/24/2005	Std. Meth. 19th Ed.	Alkalinity
Lake Ck-2	10/13/2005	10/26/2005	Std. Meth. 19th Ed.	Bicarbonat
Lake Ck-2	10/13/2005	10/26/2005	Std. Meth. 19th Ed.	Carbonate
Lake Ck-2	10/13/2005	10/26/2005	Std. Meth. 19th Ed.	Hydroxide
Lake Ck-2	10/13/2005	10/13/2005	Std. Meth. 19th Ed.	pН
Lake Ck-3	10/13/2005	10/24/2005	Std. Meth. 19th Ed.	Alkalinity
Lake Ck-3	10/13/2005	10/26/2005	Std. Meth. 19th Ed.	Bicarbonat
Lake Ck-3	10/13/2005	10/26/2005	Std. Meth. 19th Ed.	Carbonate
Lake Ck-3	10/13/2005	10/26/2005	Std. Meth. 19th Ed.	Hydroxide
Lake Ck-3	10/13/2005	10/13/2005	Std. Meth. 19th Ed.	рH
Lwr Cave Ck @ bridge-2	10/12/2005	10/13/2005	EPA 300.0	Nitrate (as
Lwr Cave Ck @ bridge-2	10/12/2005	10/13/2005	EPA 300.0	Chloride
Lwr Cave Ck @ bridge-3	10/12/2005	10/13/2005	EPA 300.0	Nitrate (as
Lwr Cave Ck @ bridge-3	10/12/2005	10/13/2005	EPA 300.0	Chloride
Lake Ck-1	10/13/2005	10/14/2005	EPA 300.0	Nitrate (as
Lake Ck-1	10/13/2005	10/14/2005	EPA 300.0	Chloride
Lwr Cave Ck @ bridge-1	10/12/2005	10/13/2005	EPA 300.0	Nitrate (as
Lwr Cave Ck @ bridge-1	10/12/2005	10/13/2005	EPA 300.0	Chloride
Lake Ck-2	10/13/2005	10/14/2005	EPA 300.0	Nitrate (as
Lake Ck-2	10/13/2005	10/14/2005	EPA 300.0	Chloride
Lake Ck-3	10/13/2005	10/14/2005	EPA 300.0	Nitrate (as
Lake Ck-3	10/13/2005	10/14/2005	EPA 300.0	Chloride

Result 1.1 ND 1.1	PQL	UNIT 0.1 mg/L 0.1 mg/L 0.1 mg/L
ND 1.2		0.1 mg/L 0.1 mg/L
ND		0.1 mg/L
110 110		1 mg/L CaCO3 1 mg/L CaCO3
ND		1 mg/L CaCO3
ND		1 mg/L CaCO3
7.6		0 pH Units
110 110		1 mg/L CaCO3 1 mg/L CaCO3
ND		1 mg/L CaCO3 1 mg/L CaCO3
ND		1 mg/L CaCO3
7.6		0 pH Units
110		1 mg/L CaCO3
110 ND		1 mg/L CaCO3 1 mg/L CaCO3
ND		1 mg/L CaCO3
7.7		0 pH Units
110		1 mg/L CaCO3
110		1 mg/L CaCO3
ND		1 mg/L CaCO3
ND 7.8		1 mg/L CaCO3 0 pH Units
110		1 mg/L CaCO3
110		1 mg/L CaCO3
ND		1 mg/L CaCO3
ND		1 mg/L CaCO3
7.8		0 pH Units
110 110		1 mg/L CaCO3 1 mg/L CaCO3
ND		1 mg/L CaCO3
ND		1 mg/L CaCO3
7.8		0 pH Units
120		1 mg/L CaCO3
120		1 mg/L CaCO3
ND ND		1 mg/L CaCO3 1 mg/L CaCO3
7.7		1 mg/L CaCO3 0 pH Units
110		1 mg/L CaCO3
110		1 mg/L CaCO3
ND		1 mg/L CaCO3
ND		1 mg/L CaCO3
7.7 110		0 pH Units 1 mg/L CaCO3
110		1 mg/L CaCO3
ND		1 mg/L CaCO3
ND		1 mg/L CaCO3

7.7 120 120 1.1 ND 8.0 120 120 1.1 ND 8.0	0 pH Units 1 mg/L CaCO3 1 mg/L CaCO3 1 mg/L CaCO3 1 mg/L CaCO3 0 pH Units 1 mg/L CaCO3 1 mg/L CaCO3 1 mg/L CaCO3 1 mg/L CaCO3 0 pH Units
120	1 mg/L CaCO3
120	1 mg/L CaCO3
1.1	1 mg/L CaCO3
ND	1 mg/L CaCO3
8.0	0 pH Units
120	1 mg/L CaCO3
120	1 mg/L CaCO3
1.4	1 mg/L CaCO3
ND	1 mg/L CaCO3
8.1	0 pH Units
120	1 mg/L CaCO3
120	1 mg/L CaCO3
1.1	1 mg/L CaCO3
ND	1 mg/L CaCO3
8.0	0 pH Units
120	1 mg/L CaCO3
120	1 mg/L CaCO3
1.1	1 mg/L CaCO3
ND	1 mg/L CaCO3
8.0	0 pH Units
120	1 mg/L CaCO3
120	1 mg/L CaCO3
1.1	1 mg/L CaCO3
ND	1 mg/L CaCO3
8.0	0 pH Units
120	1 mg/L CaCO3
120	1 mg/L CaCO3
1.1	1 mg/L CaCO3
ND	1 mg/L CaCO3
8.0	0 pH Units
120	1 mg/L CaCO3
120	1 mg/L CaCO3
1.1	1 mg/L CaCO3
ND	1 mg/L CaCO3
8.0	0 pH Units
48	1 mg/L CaCO3
48	1 mg/L CaCO3
ND	1 mg/L CaCO3
ND	1 mg/L CaCO3
7.8	0 pH Units

48	1 mg/L CaCO3
48	1 mg/L CaCO3
ND	1 mg/L CaCO3
ND	1 mg/L CaCO3
7.8	0 pH Units
50	1 mg/L CaCO3
50	1 mg/L CaCO3
ND	1 mg/L CaCO3
ND	1 mg/L CaCO3
7.7	0 pH Units
0.11	0.1 mg/L
1.5	0.1 mg/L
0.11	0.1 mg/L
1.5	0.1 mg/L
ND	0.1 mg/L
0.89	0.1 mg/L
0.11	0.1 mg/L
1.5	0.1 mg/L
ND	0.1 mg/L
0.89	0.1 mg/L
ND	0.1 mg/L
0.89	0.1 mg/L

ORCA 10_05b

ClientSampID	DateCollected	AnalysisDate PrepDate	Reference
lower cave ck @ bridge # 3	10/13/2005	10/13/2005	Std. Meth. 19th Ed.
lwr cave ck @ bridge # 3	10/13/2005	10/13/2005	Std. Meth. 19th Ed.
lwr cave ck. @ bridge # 2	10/13/2005	10/13/2005	Std. Meth. 19th Ed.
lwr cave ck. @ bridge # 2	10/13/2005	10/13/2005	Std. Meth. 19th Ed.
lwr cave ck. @ bridge # 1	10/13/2005	10/13/2005	Std. Meth. 19th Ed.
lwr cave ck. @ bridge # 1	10/13/2005	10/13/2005	Std. Meth. 19th Ed.
lower cave ck. @ entrance #3	10/13/2005	10/13/2005	Std. Meth. 19th Ed.
lwr cave ck. @ entrance #3	10/13/2005	10/13/2005	Std. Meth. 19th Ed.
lwr cave ck @ entrance # 2	10/13/2005	10/13/2005	Std. Meth. 19th Ed.
lwr cave ck @ entrance #2	10/13/2005	10/13/2005	Std. Meth. 19th Ed.
lwr cave ck. @ entrance # 1	10/13/2005	10/13/2005	Std. Meth. 19th Ed.
lwr cave ck. @ entrance # 1	10/13/2005	10/13/2005	Std. Meth. 19th Ed.

ORCA 10_05b

Analyte	Result	PQL	UNIT
Fecal Coliform	4		2 MPN/100mL
Total Coliform	14		2 MPN/100mL
Fecal Coliform	4		2 MPN/100mL
Total Coliform	11		2 MPN/100mL
Fecal Coliform	8		2 MPN/100mL
Total Coliform	17		2 MPN/100mL
Fecal Coliform	<2		2 MPN/100mL
Total Coliform	<2		2 MPN/100mL
Fecal Coliform	<2		2 MPN/100mL
Total Coliform	2		2 MPN/100mL
Fecal Coliform	<2		2 MPN/100mL
Total Coliform	<2		2 MPN/100mL